UNIVERSITY OF LJUBLJANA
SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

THE EFFECT OF MANAGERS' RISK PROPENSITY ON INVESTMENT DECISIONS

Ljubljana, July 2020 KARMEN KRVINA

AUTHORSHIP STATEMENT

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LIST OF ABBREVIATIONS

sl. – slovensko

BFI – Big Five Inventory

CAPM – Capital Asset Pricing Model

DOSPERT – Domain-Specific Risk-Taking

FDI – Foreign Direct Investments

FFM – Five-Factor Model

HMO – Health Maintenance Organizations

IP – Internet Protocol

IPO – Initial Public Offering

MBA – Master in Business Administration

MNL – Multinomial logistic

NEO PI-R – Revised Neuroticism-Extraversion-Openness Personality Inventory

NEO-FFI – Neuroticism-Extraversion-Openness Five-Factor Inventory

NPV – Net Present Value

OLS – Ordinary Least Squares

R&D – Research and Development

ROA – Return-on-Assets

ROE – Return-on-Equity

SEC – Securities and exchange commission

SMH – Somatic marker hypothesis

SMI – Swiss Market Index

SPI – Swiss Performance Index

SRM – Self-regulation model

TMT – Top management team

U.S. – United States

UBS – United Bank of Switzerland

INTRODUCTION

Humans are faced with decisions daily, for instance, what to cook for lunch, where to go on a trip, et cetera. As such, decision-making plays a central role in human behaviour where some decisions are routine (e.g., whether you want sweetened coffee), while others are strategic (e.g., which university to attend, what will be your first real job). Strategic decisions are often based on the level of risk propensity or risk aversion (Ernst et al., 2002). Risk propensity or tolerance is defined as the degree of individuals' willingness to take risks to achieve a desirable goal, whose accomplishment is uncertain (Fisher & Yao, 2017; Xiao, 2008).

In contrast, risk aversion is an individual's hesitance to take risks when faced with two alternatives: one that has an uncertain return and another whose outcome is doubtless (Fisher & Yao, 2017; Xiao, 2008). For example, lower risk tolerance or high-risk aversion might affect an undergraduate's choice for a first job – they might be unwilling to search for more job opportunities once they receive their first offer, even though it is a position they were not looking for.

Risk aversion or tolerance also has a profound meaning for corporations and their performance; a manager's ability to make decisions is affected by the degree of risk aversion or tolerance. A high-risk tolerance or low/negative risk aversion can lead to overexposure to damaging risks for the organisation, resulting in insolvency. On the other hand, low-risk tolerance or high-risk aversion can hinder growth and undermine shareholder value (Shemesh, 2017). A corporation's risk tolerance can be inferred based on various managerial behaviours/decisions, such as the debt burden, research and development expenditures, corporate diversification, working capital (Ferris, Javakhadze & Rajkovic, 2017), mergers, acquisitions, long-term financial debts (Lee & Moon, 2016), pension asset allocation (Guan & Tang, 2018), innovation, long-term investments and firm lifecycle (Plöckinger, Aschauer, Hiebl & Rohatschek, 2019). On the other hand, some researches also consider other conditions such as volatility in monthly stock returns, return on assets and return on equity (Boubakri, Cosset & Saffar, 2013; Ferris, Javakhadze & Rajkovic, 2017; Guan & Tang, 2018).

These findings are concurrent with the Upper Echelons theory, which states that organisational performance is the mirroring of the characteristics of strategic leaders (Hambrick & Mason, 1984). These characteristics are categorised into two groups: observable (e.g., gender, age, job tenure, educational and functional background and socioeconomic roots) and psychological (values, perceptions and personality traits) (Hambrick & Mason, 1984), both of which were found to influence the degree of risk aversion. The most common observable characteristic that has been studied is gender. It was found by Nicholson, Soane, Fenton-O'Creevy and William (2005) that risk-taking is predominantly a young male occurrence in the recreational, safety and health risk spheres.

In terms of financial risk, women are much more conservative than men and as such, are less likely to engage in earnings management (Faff, Mulino & Chai, 2008; Fisher & Yao, 2017; Grable, McGrill & Britt, 2009; Neelakantan, 2010; Zalata, Ntim, Aboud & Gyapong, 2019). The second most studied observable characteristic is age, which is inversely related to risk propensity (Grable, McGrill & Britt, 2009; Nicholson, Soane, Fenton-O'Creevy & William, 2005; Wang & Hanna, 1997; Yao & Hanna, 2005; Yao, Sharpe & Wang, 2011). The thesis also focusses on how personal income and educational background impact the degree of risk propensity. A positive correlation was found between income and the degree of risk tolerance, whereas findings regarding the influences of education showed both positive and negative correlations to the risk tolerance magnitude (Ardehali, Paradi & Asmild, 2005; Coles, Naveen & Naveen, 2006; Courbage, Montoliu-Montes & Rey, 2018; Cristian, 2012; Deaves, Veit, Bhandari & Cheney, 2007; Grable, 1997; Grable & Joo, 2004). As for psychological characteristics, the thesis only examines personality traits, such as extraversion and openness, found to be positively related to risk tolerance, while agreeableness and conscientiousness were found to be negatively related (Harlow & Brown, 1990; Mishra & Lalumière, 2011; Nicholson, Soane, Fenton-O'Creevy & William, 2005; Sadiq & Amna, 2019; Wang, Xu, Zhang & Chen, 2016).

The main purpose of this master's thesis is to provide insights regarding managerial risk propensity in Slovenia, specifically examining a single company, which should reveal certain intuitions regarding its possible influence on company investment decisions. Furthermore, it is expected that this thesis will encourage researchers and students to further investigate managers' risk propensities in Slovenia, particularly to understand the general behaviour of managers in terms of risk-taking in a specific industry. Specifically, the thesis will examine and present the possible effect of certain physical and personality characteristics on managers' risk propensity and the different effects they might have on investment decisions in a specific Slovenian company.

The manager's risk propensity was measured using the domain-specific risk-taking scale (Blais & Weber, 2006). The independent variables can be categorised into two main groups: demographic characteristics (e.g., gender, age, educational background, financial positions, optimism/pessimism) and personality traits (e.g., extraversion, neuroticism, conscientiousness, openness, agreeableness). Personality traits were measured using the 44-item big five inventory (John, Naumann & Srivastava, 2008). The questionnaire was administrated online, through the 1ka portal (https://www.1ka.si). The first part of the master's thesis is a literature review of past research on risk-taking in behavioural finance, decision-making theory, corporate risk-taking and factors related to risky decision-making. The second part is empirical, where the research and its results are presented. Based on the literature review, the following research questions were designed:

- How does risk propensity differ among managers in the selected Slovenian company, based on gender, age, financial position, education and personality?

– How do the identified differences influence the investment decision process in the selected Slovenian company?

This thesis has three sections: Theoretical Background, Risk-Taking in Decision-Making and Empirical Research. The theoretical background explains the concepts of risk, risk-taking and the most common managerial decision-making theory – the upper echelons theory. The next section presents a literature review of risk-taking in terms of making decisions as well as key characteristics affecting managerial risk propensity and decision-making. Furthermore, the section reviews the research connecting key managerial characteristics to corporate risk-taking. The last section is divided into two parts: methodology and results. The first part presents the employed methodology, research design and sample as well as the research ethics, and the second part discusses the results. The thesis concludes with a summary of the findings, limitations and suggestions for further research.

1 THEORETICAL BACKGROUND

1.1 Risk

In financial theories, risk is defined as the uncertainty of an asset's future market value. In mathematical terms, this is the standard deviation of the asset's return. The uncertainty can be systematic as well as unsystematic (Sharpe, 1995). The systematic risk of an asset, defined as the beta in the capital asset pricing model (hereinafter: CAPM), depends on the sensitivity of the asset to the movements of the market. If an asset has a market sensitivity below 1, it is defensive – the asset's returns have a negative correlation to the market (e.g., the returns of XYZ securities will be negatively/positively impacted to a lesser extent than the market) (Sharpe, 1995). If an asset has a market sensitivity above 1, it is aggressive – the asset's returns have a positive correlation to the market (e.g., the returns of XYZ securities will be negatively/positively impacted to a greater extent than the market) (Sharpe, 1995). The systematic risk cannot be diversified as it affects the entire market, making no distinctions between industries or companies.

A firm's systematic risk is affected by two dimensions: business risk and financial risk. The former is "the riskiness of the firms' operations if the firm takes on no debt" (Lee, Lee & Lee, 2008, p. 298), whereas the latter is "the additional risk placed on the firm and its shareholders due to the decision to take on debt" (Lee, Lee & Lee, 2008, p. 298). Business risk is closely tied to a firm's operations and the industry. For instance, no matter the state of the economy, medicine will always be bought. Thus, pharmaceutical industries are considered stable, while a more cyclical industry (e.g., automotive) would have high business risk. When a firm uses debt, the stockholders beat the business and financial risk. For instance, when the firm operates only on the initial invested capital, all the business risks are shared proportionally among the owners of the stock. However, at a 50 % debt level, the business and financial risks are fully borne by the investors (Lee, Lee & Lee, 2008, p. 299).

In general, business risk is measured by the volatility of return-on-equity, whereas the risk borne by stockholders is measured by the volatility of return-on-assets. When a firm uses debt, the volatility of return-on-equity is always higher than the volatility of return-on-assets. The difference between the two is the actual risk, which is what a stockholder bears (Lee, Lee & Lee, 2008, p. 299).

The unsystematic risk is an assets-specific risk that cannot be controlled (e.g., important logistics centre of company XYZ burns down, labour strikes, management behaviour) (Sharpe, 1995). According to CAPM, the unsystematic risk can be diversified by constructing a portfolio of securities; however, the underlining assumption is that people behave rationally, which has been argued by behavioural scientists to be untrue as people tend to deviate from rationality in predictable ways (e.g., herd behaviour, overconfidence in your abilities, over-optimism). The deviant behaviour can often have substantial consequences on the employer's reputation (e.g., Wells Fargo account fraud scandal in 2016). Thus, it became increasingly essential to study the risk-taking behaviour of managers and employees (Statman, 2014).

1.2 Risk-Taking

Risk-taking is defined as "engagement in behaviours that have some probability of undesirable results" (Boyer, 2006, p. 291). People can have different levels of risk-taking that can be measured through risk propensity or aversion. Risk propensity is an individual's willingness to engage in behaviours that are, to some degree, uncertain, while risk aversion is their hesitancy to take risks (Fisher & Yao, 2017; Xiao, 2008).

Risk-taking is argued to be an essential skill one must develop. From both non-empirical (e.g., federal policymaking and naïve parenting) and empirical perspectives, risk-taking is recognised to have significant potential consequences (Byrnes, 1998; Garon & Moore, 2004; Halpern-Felsher & Cauffman, 2001; Steinberg & Scott, 2003). In a recent study, Shemesh (2017) argued that a high-risk tolerance or low-risk aversion could create overexposure to risk for the organisation, which can be damaging and lead to insolvency. However, low-risk tolerance or high-risk aversion can also create potential issues for organisations as it can hinder growth and undermine shareholder value.

This phenomenon has been examined from several theoretical perspectives, with the most notable researches focussing on the cognitive, emotional and physiological aspects.

1.2.1 Cognitive Aspect

Cognitive theories assume that when faced with a decision-making situation, a given behaviour is evaluated based on the presumed costs and benefits (Savage, 1972; von Neumann & Morgenstern, 2007). As such, in early studies, it was suggested that risk could

be modelled as the sum product of the probabilities of success and monetary prize outcome variables called the utility of gamble (Bernoulli, 1954). It was suggested that to maximise expected utility, people had to behave rationally. Meaning, the costs associated with risky behaviour would outweigh the benefits if the individual refrained from engaging in potentially harmful behaviours (Savage, 1972; von Neumann & Morgenstern, 2007).

However, several subsequent experiments have demonstrated that humans do not behave rationally (Kahneman & Tversky, 1973; MacCrimmon & Larsson, 1979). Depending on how risk is framed in a given choice, people make inconsistent decisions. Furthermore, given identical probabilities and value structures, people tend to prefer risky options, especially when a choice is framed in terms of its potential losses rather than gains (Kahneman & Tversky, 1984). One example of this phenomena is the flu vaccination.

> "When given a gain-framed choice between vaccines, one of which would save a given number of people with certainty (e.g. 200 people) and a riskier option that would save an equivalent expected value (e.g. 600 people 1/3 of the time), … participants tended to prefer the former, safer option. If, however, participants were given a loss-framed choice between vaccines, one of which would lead to the certain death of a number of people (e.g. 400 people), and a riskier option that would lead to the death of an equivalent expected value (e.g. 600 people 2/3 of the time), they tend to prefer the riskier option." (Boyer, 2006, p. 295)

Risk-taking can be studied by looking at the actual risk-taking values (i.e., questionnaire or interview methodologies) or through experiments. A majority of which focus on the cognitive aspect in children or adolescents, as their risk-taking tendencies have significant implications for psychologists, parents and governments. One of the first cognitive risk-taking studies involving children was conducted by the researcher Slovic (1966), where 6 to 16-year-old participants (N = 1,047) were shown a row of 10 switches – one was a risky disaster switch, and the others were safe. The participants had to decide how many and which switches they would like to pull, knowing that a prize would be granted for pulling the safety switch and all prizes lost on pulling the disaster switch. The risk-neutral person opted for pressing five switches, anything below showed risk aversion and anything above presented a risk-taking tendency. One drawback of the study was self-selection bias because the participants volunteered to take part in the experiment at a public fair, hence they were more courageous.

Another study conducted by Lejuez et al. (2002) involved the balloon analogue risk task. Participants in the study where asked to inflate a balloon where each pump earned a certain amount of money. Participants could pump up the balloon as much as they liked, however, if they did not collect the money before the balloon popped (a random event), they would lose the money earned. The experiment revealed a correlation between task performance and real-world risk behaviours (e.g., cigarette smoking and alcohol consumption).

The research in risk-taking also led to the development of the decision game, which is an experimental decision-making task. Byrnes and McClenney (1994) presented the participants with a simple game board (like Game of Life or Wit's End) that had a base area connected to three intermediate card areas using paths, which then led to a goal area. In the central area, the participant was required to flip a card, revealing a trivia question or a "go back to base" command. The three paths had different levels of difficulty – one had more straightforward questions, representing a safer path, one represented moderate risk with slightly more difficult questions, and one had more "go back to base" commands, representing the riskiest path. Given the design, the participants faced the risk of choosing the more difficult path in their pursuit of the goal area. One criticism of the decision game is that "probability is not stringently controlled, but rather, it is confounded with knowledge (i.e., choosing the difficult path entails no more risk than the easy path if one is able to answer all the questions from each path)" (Boyer, 2006, p. 299).

The researches focussing on cognitive aspects have come to the perplexing paradox where traditional developmental theories clash with the general findings of risk-taking research. The cognition-age-prevalence paradox stems from traditional developmental theories suggesting that with age, risk-taking should decrease because people develop higher cognitive skills and become more rational. However, studies have found that adults are less risk-averse than adolescents. The same relationship was found between adolescents and children (Byrnes, 1998; Byrnes & McClenney, 1994; Lejuez et al., 2002; Slovic, 1966); therefore, a decrease in risk-taking tendencies is not associated with the increase in cognitive sophistication, arising from the transition from childhood to adulthood. As a response to the findings, a new development theory emerged called the fuzzy-trace theory, which predicts that with development comes a more intuitive gist-like approach over a quantitative one. In order to make rational decisions in risky situations, it is crucial to extract the gist from such situations (Reyna, 1996, 2004). To sum up, the cognitive decision-making theorists analysed the risk-taking propensity by looking at the alternatives and their desirability (e.g., probabilities associated with alternatives and their consequences).

1.2.2 Emotional aspect

The implication of emotions in risk-taking has been researched from two perspectives: one of them focusses on how the reactions to emotion-provoking experiences influence potentially risky decision-making situations. Increasing positive emotions and decreasing negative emotions is expected to increase the odds of risk engagement while decreasing positive emotions and increasing negative emotions is likely to deter risky behaviour (Bechara, Damasio & Damasio, 2000; Caffray & Schneider, 2000; Catanzaro & Laurent, 2004; Loewenstein, Weber, Hsee & Welch, 2001). On the other hand, the other perspective focusses on the role of emotional regulation. It is believed that emotionally dysregulated populations (e.g., anger or impulse prone populations) are more inclined towards engaging in risky behaviours than emotionally regulated ones (e.g., rationality prone populations)

(Cauffman & Steinberg, 2000; Cooper, Agocha & Sheldon, 2000; Eisenberg et al., 2005; Lemery, Essex & Smider, 2002).

One of the more prominent hypotheses regarding the emotional aspect is the somatic marker hypothesis (hereinafter: SMH), developed by Bechara, Damasio and Damasio (2000). Their research theorised that negative or positive emotional responses to risky situations guide people's decision-making. Without emotions, people cannot make rational decisions, which in effect causes an increased tendency towards risk-taking. Most of the evidence for the SMH was gathered through an experimental task titled the Iowa gambling task. Cognitively indistinguishable participants were presented with four card decks (two risky – having more substantial payoffs and losses, two are safe – having small payoffs and losses); afterwards, they had to make a series of card selections. Those who were emotionally stable tended to gravitate towards the safe decks after around 30 trials, while the emotionally unstable tended to choose the risky options much more than was sensible (Bechara, Damasio & Damasio, 2000). One of the criticisms of the theory is that it can easily be manipulated for emotionally impaired participants to appear more stable than they are (Fellows & Farah, 2005).

Whereas SMH focusses on potential emotional costs and benefits of certain behaviours, the self-regulation model (hereinafter: SRM) focuses on risk-taking behaviours as the product of impulsivity. Byrnes, Miller and Reynolds (1999) hypothesised that individuals who fail to regulate their emotions might engage in risky behaviour because they do not engage in critical decision-making processes (e.g., attending to incoming information). A similar study was proposed by Steinberg and Scott (2003). The theory of criminal and antisocial behaviour theorises that temperance – "the ability to limit impulsiveness and evaluate situations prior to acting" – is necessary for rational decision-making in risky situations (Boyer, 2006, p. 309).

One key factor that the researches on the influence of emotions in risk-taking discovered was that emotional regulation and affective decision-making increase with age, while they also decrease risk-taking behaviours. Thus, this creates a paradox, as with age, risk-taking behaviours should decrease; however, as mentioned, adults are less risk-prone as compared to an adolescent (Cauffman & Steinberg, 2000). All in all, emotions play an important part, and the degree of emotional stability can indicate an individual's level of risk aversion.

1.2.3 Physiological Aspect

The physiological aspect of risk-taking is still relatively under-researched, however, in the literature, three approaches can be identified:

- Neuro-cognitive,
- Neuro-affective,
- Psychological developmental.

The neuro-cognitive approach looks at how the brain responds to various risk-taking situations. Researchers used positron emission tomography (PET) scans or magnetic resonance imaging (MRI) to identify which sections of the brain are activated when participants are presented with experimental risk-taking tasks. It was found that the first areas to be activated are sensory-monitor pathways, which identify stimuli and possible decision alternatives. If these pathways are impaired, then the sensitivity to outcome values is lowered, which in turn increases risk-taking tendencies (Ernst et al., 2004).

The neuro-affective approach, on the other hand, looks at the part of the brain that activates itself when fear is present in the situation – this part of the brain is called the amygdala. Fear is quite relevant for the research of risk-taking, as the fear of consequences can significantly affect the choice of alternatives in a risky situation and can moderate exploratory and withdrawal behaviours, central to risk-taking. One of the potential explanations for risky behaviour could be that the amygdala is inhibited or impaired and, thus, cannot curb the behaviour as it would typically (Davis & Whalen, 2001).

The psychological developmental approach focusses more on changes in hormones and neurotransmitters rather than brain activity. It was discovered that an increase in sex hormones (i.e., testosterone), androgenic hormones and excitatory dopamine could all be related to an increase in the tendency to take risks (Zuckerman, 1979). Furthermore, decreased relative inhibitory monoamine oxidase and gamma-amino-butyric acid neurotransmitters can also lead to an increase in risk-taking behaviour (Spear, 2000). As such, these developments are associated with lower risk aversion, which is in contrast with the cognitive and affective neurological aspects, since the non-normal behaviour of the brain leads to higher risk aversion.

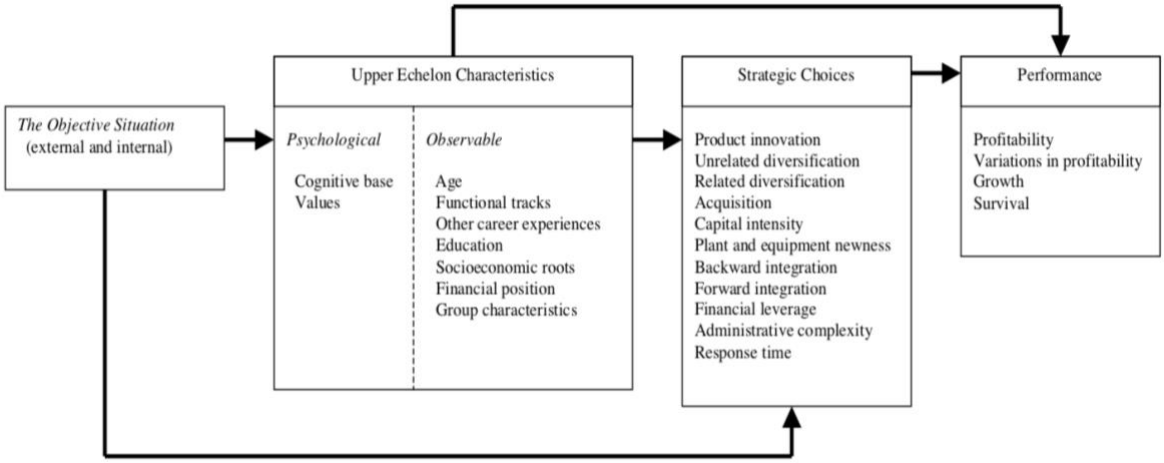
1.3 Upper Echelons Theory

Understanding managerial decision-making is essential for the firm as strategic choices impact firm performance. A study by Wang, Holmes, Oh and Zhu (2016) showed that the performance of the firm is negatively impacted when managers or one of their relatives die, even up to two years after the event. Furthermore, researchers found that not only managers are essential for firm performance but also their characteristics (Graham, Harvey & Puri, 2013; Tixier, 1994). These findings are consistent with the upper echelons theory.

The upper echelons theory states that the personal characteristics of the top management team (hereinafter: TMT) are reflected in corporate decision-making and performance. Hambrick and Mason (1984) theorised that not only the external environment influences the actions and outcomes of corporations but also internal influences, such as TMT characteristics, are impactful. These characteristics can be divided into two groups: observable and psychological. In terms of observable characteristics, the theory focuses on demographic aspects such as age, gender, functional tracks, education, financial position and occupation. As for the psychological, it looks at the cognitive base and values (Hambrick &

Mason, 1984). However, these constructs are hard to measure, thus Hambrick and Mason (1984) suggested using observable constructs as proxies. The impact of these proxies on the cognitive process will subsequently be reflected in strategic choices, eventually impacting organisational performance along several dimensions, from profitability to the firm's survival. The summary of the upper echelons theory is shown in Figure 1.

Figure 1: Upper Echelons Theory



Source: Hambrick & Mason (1984).

A revised version of the theory was published by Hambrick (2007), who took notice of two main moderators (managerial discretion and executive job demand) that make managerial characteristics better predictors of organisational outcomes. Managerial discretion is described as the freedom to make strategic choices. It is assumed that the higher the degree of managerial discretion, the better become the predictors of organisational outcomes of managerial characteristics (Hambrick, 2007). The second moderator, executive job demand, is defined as the level of challenges faced by top managers. It was postulated that higher the level of challenges faced, greater are managers under time constraints and reliance on mental shortcuts as well as personal backgrounds. Hence, when the level of managerial challenges is high, the relationship between managerial characteristics and organisational outcomes is more reliable (Hambrick, 2007).

Throughout the years, numerous researchers (e.g., Finkelstein & Hambrick, 1990; Smith et al., 1994) have studied the upper echelons' influence on corporate strategy, innovation, performance, organisational structure and planning formality. However, only a few have empirically demonstrated the relationship between managerial characteristics and the decision-making process.

Rost and Osterloh (2010) were prompted by the 2008 financial market crisis to investigate the TMT and their influence on decision-making. They argued that the lack of heterogeneity and differentiated viewpoints in TMTs was the essential reason for the failures that led to

the crisis. They also conducted a two-part study to investigate the conditions of gender and knowledge which could cause biased information processing. A total of 355 students from the University of Zurich and the Swiss Federal Institute of Technology, from various fields of study, were used for this research. Participants were asked to forecast the United Bank of Switzerland (hereinafter: UBS) stock price, which was then analysed with the actual UBS stock price two months later (Rost & Osterloh, 2010). It was revealed that in conditions of considerable uncertainty, expertise, and gender influenced the precision of forecasting predictions. For the second part of the study, Rost and Osterloh (2010) included all 30 banks listed on the Swiss Market Index (hereinafter: SMI) and the Swiss Performance Index (hereinafter: SPI). They looked at the TMT structure and its effects on the performance of the bank using ordinary least squares (hereinafter: OLS) regression analyses, at different time points. Additionally, they separated the TMT between the executive and non-executive teams. The results indicated that the TMT with a higher percentage of people from a non-finance-related background was associated with substantially lower firm performance, thus proving that knowledge is correlated with firm performance. However, it should be noted that the second sample did not verify any significant difference between gender or management team composition and firm performance (Rost & Osterloh, 2010).

Schwenk (1995) reviewed the strategic decision-making literature and noted that the research had made significant progress in understanding the causes and consequences of TMT strategic decisions (e.g., Michel & Hambrick, 1992; Wiersema & Bantel, 1992; Keck & Tushman, 1993) as well as the relationship between managerial characteristics and company performance (e.g., Bantel & Jackson, 1989; Murray, 1989). However, two issues seemed to persist in this area of research – moderating variables and causality. Schwenk (1995) explained that the ability to prove causality is vague due to the lack of laboratory research. Thus, he advocated the need for laboratory research to allow for making direct decision-making observations and to control the theoretically perplexing variables. While there has been little experimental research to this date, researchers have found creative approaches to collect data in the absence of direct observations (Papadakis, Thanos & Barwise, 2010).

One example of such an approach is the study conducted by Hermann and Datta (2006), who explored the effects of chief executive officer (CEO) characteristics on foreign direct investment (hereinafter: FDI). Specifically, they investigated the CEO age, firm experience, functional experience and international experience concerning greenfield investments, acquisitions and joint ventures, which were recognised as alternative FDIs. Hermann and Datta (2006) sampled 78 firms that fulfilled the following three criteria:

> "(1) Publicly traded firms in the U.S. manufacturing sector with at least 250 million in sales; (2) Deriving at least 50 per cent of its sales from its primary four-digit [standard industrial classification] (SIC) business segment; (3) Associated with foreign market entry in the five years following the succession event." (pp. 766–767)

Together, the 78 firms had 380 foreign market entries (306 wholly-owned subsidiaries and 74 joint ventures) in the five years after the CEO's succession. Out of the 306 wholly-owned subsidiaries, 245 were acquisitions and the remaining 61 were greenfield ventures. The data for the dependent variable was gathered from various sources such as *The Wall Street Journal, Moody's Industrial Manual, firms' annual reports* and U.*S. securities and exchange commission (*hereinafter: *SEC) filings (e.g., 10-K statement)* (Hermann & Datta, 2006). Data on the independent variable (CEO characteristics) were gathered from the *Dun and Bradstreet Reference Book of Corporate Managements*, *Standards & Poor's Register of Corporations, Directors and Executives*, and *Who's Who in Finance and Industry*. To test the hypotheses, Hermann and Datta (2006) used a multinomial logistic (hereinafter: MNL) regression that entailed a maximum-likelihood estimation for three-way dependents.

The study found that older CEOs with years of firm experience tended to prefer less risky and resource-intensive FDIs and joint ventures in greenfield investments and acquisitions (Hermann & Datta, 2006). Furthermore, CEOs whose practical experiences were tied to throughput tended to prefer FDIs that permitted more control and greater ownership. In contrast, CEOs whose practical experiences were tied to output tended to prefer joint ventures. Additionally, it was found that internationally experienced CEOs opted for riskier, more resource-intensive and highly data-intensive FDIs (Hermann & Datta, 2006). This research supplied enough evidence of the effects of the CEO's experiences on strategic decision-making.

Another example is the research of Yang, Zimmerman and Jiang (2011) that investigated the relationship between CEO characteristics (executive experience, role as founder, education, network, age and CEO duality) and the firm's time in becoming an initial public offering (hereinafter: IPO)[1]. The sample consisted of 237 US-based software companies that went public between 1 January 1993 to 31 December 1999. The data was collected from the IPO reporter and IPO data publications (Yang, Zimmerman & Jiang, 2011). The results of the research confirmed the authors' hypothesis that well-networked and young CEOs with executive experience are more likely to have a shorter time to IPO.

Most of the research focussing on the upper echelons theory has been directed towards the traditional observable managerial characteristics. However, a few have also examined unobservable characteristics such as personalities, dispositions and biases of the TMT. Li and Tang (2010) assessed the influence of CEO hubris, or exaggerated self-confidence, on corporate risk-taking and how managerial discretion acts as a moderating role in the relationship. The authors sampled 2,790 firms who participated in China's government-funded Entrepreneurs Survey, conducted in 2000. A positive relationship between CEO hubris and corporate risk-taking was found; however, the relationship was contingent on managerial discretion. As long as the manager's discretion is high, the relationship between

[1] Initial public offering is an event that transforms the firm from a privately held corporation into a publicly traded corporation. It allows the entrepreneurs, employees, venture capitalists and other investors to cash out as well provides funds for the firm to undertake new projects (Chang, 2004).

corporate risk-taking and CEO hubris is strong. As such, the research points to a need for further investigation of personality and non-observable characteristics. In the next section, I present in detail the relationship between risk propensity and decision-making, which is the focal point of this research.

2 RISK-TAKING IN DECISION-MAKING

Tremendous research has been conducted in the area of risky decision-making, which is typically assessed by examining the willingness to undertake risky options over safer ones. A decision-maker is deemed to be a risk-seeker if the riskier option is preferred over the safer one (Warneryd, 1996). More generally speaking, decision-makers are inclined to base their decisions on experience and are more cautious when there is a potential for gain. In contrast, when examining the domain of losses, preceding knowledge of one's risk preferences in gains is only moderately predictive, thus showing the moderating impacts of individuals' dissimilarities (Schneider & Lopes, 1986).

The research on risk-taking behaviour in decision-makers is vital in terms of strategic success. As stated, decisions taken by managers impact the strategic outcomes of an organisation; however, whether their actions will be conservative or aggressive is determined by their risk aversion (Hambrick & Mason, 1984; Kahneman & Tversky, 1984; Schneider & Lopes, 1986; Warneryd, 1996). The determinants of risk aversion are perceived risk and risk propensity, which vary among individuals based on their characteristics (Sitkin & Pablo, 1992; Sitkin & Weingart, 1995).

2.1 Perceived Risk

Perceived risk is deemed to be more critical than actual risk because, in conditions of uncertainty, a person decides based on their subjective evaluation of the risk. Despite this, even in conditions of certainty, people still decide subjectively, because of the internal assessment of the probability of and exposure to loss (MacCrimmon & Wehrung, 1986). In decision-making literature, it was found early on, that a manager's risk perception can lead to unwarranted confidence in their judgment, knowledge and ability to perform under risky conditions (Allman, 1985; Rao & Monroe, 1988; Slovic, 1966). Perceived risk is a multidimensional construct that can be broken down into three components: magnitude of the loss, chance of loss and exposure to loss. The magnitude of loss is the degree of potentially unfavourable outcomes, while the chance of loss is the probability that a potentially unfavourable outcome will happen, and the exposure to loss is the ability of an individual to increase or decrease the magnitude or chance of loss (MacCrimmon & Wehrung, 1986; Slovic, 1966).

Much of the area of research on risk perception is founded in the prospect theory, which rejects the notion that people rationally calculate their expected utility based on risk and

return associated with various options (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981). The theory provides strong evidence that people's actual decision-making is based on perceived value rather than actual worth. The critical assumptions of the prospect theory are as follows:

> "(1) Alternatives are framed as either gains or losses in comparison to a reference point; (2) The utility function is an S-shaped curve, concave for gains and convex for losses, suggesting losses loom larger than corresponding gains; (3) Individuals show tendencies toward risk aversion when facing gains and toward risk-seeking when facing losses (that is probable losses are preferred to sure losses); (4) Lower probabilities are overweighed, and higher probabilities are underweighted." (Shimizu, 2007, p. 1496)

Various researchers have found supportive evidence of prospect theory (e.g., Bromiley, 1991; Lehner, 2000; Miller & Leiblein, 1996); however, other researchers suggest the presence of threats make decision-makers risk-averse (e.g., Janis & Mann, 1977; March & Shapira, 1987; Staw et al., 1981). The contradictions originate from the correlation between risk perception and risk propensity (Sitikin & Pablo, 1992).

In the literature on risk, perceived risk was indicated to have a direct effect on decision-making, especially when individuals base their decisions on their perceived assessment of the present risk (Sitkin & Pablo, 1992; Sitkin & Weingart, 1995). The greater the possible loss, the higher is the perceived risk by an individual and more significant is their risk aversion (Sitkin & Weingart, 1995). Decision-makers supposedly tend to either abandon a risky project or take actions to reduce the level of risk to something acceptable or a more practical level, which means increasing the safety level at minor cost increase. However, when the risk is unacceptable, the decision-maker will either seek other projects that will lower levels of or try to adjust the risk (Rowe, 1977). The risk can be adjusted in three possible ways: collecting information, delaying decisions and sharing the risk with others (MacCrimmon & Wehrung, 1986). The tendency to adjust the risk is dependent on a manager's risk propensity, which is the tendency of an individual to either avoid or take risks (Kogan & Wallach, 1964; Rowe, 1977; Sitkin & Pablo, 1992).

2.2 Risk Propensity

Previously, it was established that in correlation with risk perception, risk propensity determines the degree of risk aversion. Akin to risk perception, risk propensity has a direct effect on the manager's decision-making. The higher the tendency to take risks, the more willing managers are to make risky decisions, especially when their perceived risk rises to an acceptable level (Sitkin & Pablo, 1992).

Determinants of risk propensity fall under two categories: constant and situational factors. Constant factors include risk preferences, personal experience, personality variables,

individual variables (e.g., gender, age, educational background, financial position) and organisational variables (e.g., TMT risk orientation, cultural risk values, control systems). On the other hand, situational factors include problem framing, levels of organisational slack, level of power and TMT heterogeneity (Kogan & Wallach, 1964; MacCrimmon & Wehrung, 1986, Ouchi, 1979; Sitkin & Pablo, 1992).

Throughout the years, many studies have examined the influence of managerial characteristics on risky decision-making. One such study was conducted by Musteen, Liang and Barker (2001), who researched the effect of CEOs' perceptions about the severity of organisational decline on decision-making regarding retrenchment activities as well as how the perception might be influenced by their characteristics, such as personality and knowledge base. The sample consisted of 110 students from a Master for Business Administration (hereinafter: MBA) programme from a large state university in the US, taking part in the General Management and Strategy course taught by one of the researchers (Musteen, Liang & Barker, 2001).

The participants were asked to read and analyse a Harvard Business Case called Buxton, Inc. before class, pretending that they were the appointed CEO of the firm. The results found a positive relationship between managerial maturity and decision-makers' perception of the severity of organisational decline (Musteen, Liang & Barker, 2001). Furthermore, it was found that the higher the level of external locus of control by the decision-maker, the higher the perceived severity of the decline. Moreover, it was indicated that the functional background associated with the throughput process is positively associated with the decision-makers' perception of the severity of the decline (Musteen, Liang & Barker, 2001). The study showed that the personal frames of reference influenced the perception of an individual and led to different strategic decisions. As such, managers need to understand this concept and adjust accordingly (Musteen, Liang & Barker, 2001). Hence, the research highlights the potential of the effect of personal differences in risky decision-making.

Another research about the effect of managerial characteristics on risky decision-making was conducted by Maner et al. (2007). They looked at the shared effect of power and an individual's level of power motivation on risky decision-making. Prior research has found that power has a positive relationship with risky decision-making (Anderson & Galinsky, 2006; Keltner et al., 2003); the tendency to make risky choices increases with the level of power. In contrast, Tetlock (2002) found that power may also lead to conservative decision-making, thus contradicting the general findings in this research area.

Maner et al. (2007) conducted a two-experiment study that evaluated the elements of power that would lead to conservative or risky decision-making. The first experiment was conducted on 84 undergraduate psychology students who were given $5 for their participation and course credits. The participants were asked to complete a fake test about an individual's spatial ability. While pretending to score the test, participants were asked to fill out a leadership questionnaire that would supposedly determine the participant's

suitability for a managerial role. Following a short break, participants were divided into Power and Control groups. While the Power group was told that their roles in the task were assigned based on the scoring of the two previously filled out tests, the Control group was told that they had equal responsibilities and authority in the upcoming task. The researcher then led both groups to believe that they had to complete another test about spatial ability before their final questionnaire. However, this task involved an opportunity to wager their $5 based on their performance for a chance to triple the amount. After making their bets, students completed the final questionnaire that included a measure of power motivation.

The findings suggested that in interaction, power and power motivation influenced risky decision-making (Maner et al., 2007). It was found that individuals who were given power and had low power motivation and tended to make riskier decisions. In contrast, those with high power motivation were prone to conservative decision-making. Since the findings were perplexing regarding the positive relationship between risk-aversion and level of power motivation, an additional experiment was conducted (Maner et al., 2007). Similar to the first experiment, participants (153 undergraduate students) were told that they would be working in groups on a spatial ability task. However, now the groups would have a designated manager who had the authority and responsibility to manage the group. The suitability of the manager would be determined based on the scoring on the leadership questionnaire, completed before being assigned conditions of Fixed Power, Unstable Power and Control. Both Fixed Power and Unstable Power conditions were led to believe that their group manager was selected based on their natural leadership abilities. However, individuals in the Unstable Power condition were led to believe that the hierarchy of the group could change and that the leadership role depended on their performance. In contrast, the Control condition was led to believe that no roles had been assigned. The experiment was concluded involving participation in a computer task that calculated a behavioural index of fundamental risk decision-making (Maner et al., 2007).

The second experiment results demonstrated a new moderator in the effect of power on decision-making (Maner et al., 2007). This effect was not only influenced by the level of personal power motivation but also by the nature of the power arrangement. The study concluded that people with a high level of power motivation made conservative decisions when the power arrangement was unstable, and risky decisions when the power arrangement was stable. Thus, Maner et al.'s (2007) research revealed the importance of an individual's role within a group or organisation in terms of risky decision-making. This thesis tries to expand this study by providing further evidence of the importance of an individual's role within an organisation, through the examination of middle and top management risk propensity in a Slovenian company and its effect on investment decisions.

2.3 Individual Characteristics

The research dives deeper into gender, age, financial position, educational background and personality traits as the determinants of individual risk-taking. The following sections present the link between these characteristics and risky decision-making.

2.3.1 Gender

Although not presented in the Hambrick and Mason's (1984) upper echelons theory, gender differences among managers have been discussed in the decision-making literature. Female leaders were found to be more innovative, proactive, cautious, transformational and risk-averse than males in equal positions, which can lead to potential differences in values, opinions, goals and attitudes among them (Bass & Avolio, 1994; Eagly, Johannesen-Schmidt & van Engen, 2003; Huang & Kisgen, 2013; Thiruvadi & Huang, 2011; Tullett, 1995). Looking at upper echelons theory, gender differences can be viewed as group characteristics that bring diversity into the TMT. Diversity has often been found to be positively correlated to the firm's performance (Agyemang-Mintah & Schadewitz, 2019; Delgado-Márquez, de Castro & Justo, 2017; Moreno-Gómez, Lafuente González & Vaillant, 2018; Parola, Ellis & Golden, 2015).

Gender has also been studied in risk-taking literature as an essential determinant of the level of risk-aversion. A research conducted by Ertac and Gurdal (2012) looked at gender effects on risk propensity regarding decision-making on behalf of a group and compared it to their individual decisions. This aspect of decision-making is vital as managers often need to make decisions that have implications for others (Ertac & Gurdal, 2012). Before this study, it was found that individuals' risk-aversion declined when making decisions for strangers, compared to decision-making for themselves (Chakravarty, Harrison, Haruvy & Rutström, 2011). Furthermore, it was found that individuals consider their risk-aversion as well as the perceived risk preference for the group when making decisions on behalf of the group (Daruvala, 2007).

The experiment was conducted on 128 students in undergraduate economics courses at two Turkish universities. The research experiment was designed to incorporate two decision-making components – individual and group (Ertac & Gurdal, 2012) – with each including three decision-making tasks. The participants had to decide how much of 10 Turkish Liras to allocate for a risky and a riskless choice. The first three tasks were made for individual decision-making, followed by three that included decision-making on behalf of a group of five randomly selected participants who never learned who was in their group (Ertac & Gurdal, 2012).

The research found men to be more willing than women to make risky decisions that affected others. Furthermore, women took lesser risks when they were put into a leadership position than men (Ertac & Gurdal, 2012). Additionally, the study provided evidence of the

difference in risk-aversion between leaders and non-leaders, demonstrating that male leaders took more risks than male non-leaders, while there was no significant difference between the women. The results support prior research on the relationship between gender and risky decision-making.

The research on the relationship between gender and risky decision-making also focussed on the differences in the five decision domains: social, ethical, recreational, health/safety and financial decisions. Weber, Blais and Betz (2002) found gender differences in all domains except social decisions. Their study found that males perceived less risk and indicated a higher likelihood of engaging in risky behaviours. Similar findings were found by Harris, Jenkins and Glaser (2006) and Johnson, Wilke and Weber (2004). These findings suggest that individual characteristics, specifically gender, influence the degree of risk-aversion and actions taken in risky decision-making.

2.3.2 Age

One of the characteristics described in the upper echelons theory is age, which is associated with vigour, risk propensity, reckless decisions and learning (Hambrick & Mason, 1984). Researchers have found that younger managers are more reckless in their decision-making than older managers, who take time to evaluate a situation from various angles to make a more informed decision (Carlsson & Karlsson, 1970; Chown, 1960; Taylor, 1975). On the other hand, younger managers are more innovative and growth-oriented than older managers, which can lead to an increase in the firm's profitability (Child, 1974).

Particularly, Finucane et al. (2002) compared the comprehension and consistency of younger and older adults. The participants were presented with a tabular format that contained information about several Health Maintenance Organisations (hereinafter: HMOs). Upon reading the information, they were asked to make decisions in three domains: health, finance and nutrition. They were given various literal and inferential questions about the information to assess their general comprehension, with multiple-choice answers. The research concluded that older participants were more sensitive to how the question was formatted as they made significantly more errors than younger adults when answering inferential questions.

Furthermore, the research also assessed their judgment consistency by presenting the participants with two HMOs plans. First, the participants evaluated them separately and then side by side. The research revealed consistent data among both groups, both evaluated one plan as better when presented individually but, when put side by side, they choose the other answer. This suggests that the context of information significantly impacts the judgment of attractiveness, and consistency suffers when information is presented in a comparative context, meaning that when additional information is presented, the comparison will allow for alterations in the relative values assigned to options (Finucane et al., 2002).

Further research on the influence of age in risky decision-making found that risk propensity in the financial domain reduces steeply with age, especially for males. The recreational risk propensity is said to reduce more steeply from young to middle age than later in life. Ethical and health risk domains are positively correlated with age. As for the social risk domain, it was found that it increases slightly from younger to middle age, before sharply declining in later life (Rolison, Hanoch, Wood & Liu, 2014).

On the other hand, contradictory evidence was found when investigating age, optimism and risky decision-making. Since optimism is positively associated with risk-taking and age (Chopik, Kim & Smith, 2015; Dohmen, Quercia & Willrodt, 2018), researchers argue that it is why older people might be perceived as more risk-prone than younger generations (Huang, Wood, Berger & Hanoch, 2013; Pachur, Mata & Hertwig, 2017).

2.3.3 Financial Position

Another TMT characteristic mentioned in the upper echelons theory is the financial position, as it relates to the TMTs rewards systems (Hambrick & Mason, 1984). Researchers have found that performance-based compensations may lead to reckless decision-making, causing a short-term uptick of the stock price but ultimately hurting the firm. Thereby, managers might be incentivised to inflate current earnings by decreasing advertising and research and development (hereinafter: R&D) (Mizik & Jacobson, 2007; Stein, 1989). On the other hand, such compensations might incentivise managers to be more cautious regarding their strategies, which could improve a firm's long-term performance (Ismail et al., 2011; Jordan, 2010; Pfeiffer & Shields, 2015). Another type of compensation that has become increasingly popular in the last decade is equity-based compensation, which helps align the interest of managers with that of the shareholders. A higher stake a TMT possesses in the company, the more willing he is to undergo growth and diversification strategies beneficial for the long-term survival of the firm (Coles, Naveen & Naveen, 2006; Conyon, Fernandes, Ferreira, Matos & Murphy, 2013; Jensen & Meckling, 1976; Rajgopal & Shevlin, 2002).

However, rewards systems are not the only forms of financial position that influence firms' risks. Research has found significant evidence that managers' personal wealth influences risky decision-making, and consequentially firm performance. Becker (2006) found that wealthier managers have lower risk aversion as compared to their counterparts of lower personal wealth. Because their financial security is greater (they have a lower dependency on firm performance), their wealth can act as a buffer when projects fall through or take longer to provide positive cash flows. For example, a manager who accumulates wealth not only through salary or corporate rewards will be more prone to take on risky investments, as compared to someone whose wealth is closely tied to the financial performance of the firm. Essentially, personal wealth accumulated from outside sources helps managers diversify firm-specific risks.

Thus, achieving relative financial security plays a vital role in maximising the utility function, as the importance of income shifts towards managerial reputation. Meaning, building reputation and status in the business world brings more happiness to TMTs than obtaining a higher salary or monetary success in their investments. However, this can increase the TMT's willingness to take on additional risk as breakthroughs could significantly improve their reputation. A prime example is Apple's former CEO Steve Jobs, who received a $1 salary because his need for self-actualisation was satisfied with Apple's successful innovations, which were his claim to fame (Becker, 2006; Hoskisson, Hitt, Johnsosn & Grossman, 2002).

2.3.4 Educational Background

Hambrick and Mason (1984) believed that education is one of the TMTs characteristics that influence their decision-making process for it represents a person's skill and knowledge base. A manager who has an engineering degree possesses a different mindset than a manager with a business degree. The former might be more focussed on the internal performance of the firm, while the latter might focus more on the profitability of the company. Further research proved Hambrick and Mason's (1984) hypothesis regarding the strategy chosen by the firm. Dearborn and Simon (1958), Hayes and Abernathy (1980) and Miles et al. (1978) found that the strategy a firm will be pursuing depends on the manager's educational background.

Educational background is also an essential determinant in the risky decision-making process. It was discovered by MacCrimmon and Wehrung (1986) that managers who hold a post-graduate degree are more likely to take risks than managers with lower educational qualifications. The discovery was further solidified by the research of Beber and Fabbri (2012) and Betrand and Schoar (2003), who found that CEOs with an MBA choose more aggressive corporate strategies and speculated more in the forex market. However, it was suggested by Graham and Harvey (2001) and Orens and Reheul (2013) that post-degree specialisations, such as an MBA or a doctorate, lead to higher risk aversion because managers tend to be more focussed on long-term development and using sophisticated project evaluation techniques.

It could be said that further development of knowledge and skills instils confidence in people, which increases their risk tolerance, but simultaneously makes them more prudent. Managers who have post-graduate degrees and continuously keep improving their skill sets are more prone to taking risks; however, when evaluating between different risky projects, they are capable of making better decisions than managers with lesser education.

2.3.5 Personality Traits

Personality entails a set of individual characteristics that relatively stabilise over time and are usually conceptualised in bipolar terms (McAdams, 2006). Most researchers agree that the five-factor model (hereinafter: FFM) can explain personality as a trait in the best way possible (Pervin, 2000). The most widely used FFM was created by Costa and McCrae (1992). They defined the five factors (also known as the big five) as openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. Openness to experience is generally determined by traits such as intellectuality, imaginativeness and open-mindedness, while conscientious people are responsible and orderly. Traits such as being talkative, assertive and energetic are generally associated with extraverts, while traits such as good-naturedness, trustfulness and cooperativeness are associated with agreeableness. Furthermore, neurotic people are said to be restless and easily upset.

In the past decade, these five factors have been substantially researched in the context of risky decision-making. Lauriola and Levin (2001) studied the big five personality traits in decision-making by utilising a short adjective checklist to evaluate the personality of the participants and administering a forced-choice decision task that varied in the probability and value of and the actual outcome. Participants had to choose between a risky and risk-free contract that was equal in expected value and framing context (either framed as a potential loss or gain). The results showed that participants with low openness and neuroticism showed a more significant risk tolerance when the contracts were framed as a potential gain. In contrast, high neuroticism was related to a higher risk tolerance when the contracts were framed as a potential loss. Furthermore, when the goal was to achieve gain rather than avoid loss, neuroticism, openness and extraversion were significant predictors of risk-taking.

Another study by Levin, Gaeth, Schreiber and Lauriola (2002) researched the framing effect of risky options in relationship with the big five. The participants in the study were presented with objectively similar scenarios, only differing in framing. The favourable scenario had two options:

- Option 1: One-third of individuals will succeed in reducing the risk of heart disease,
- Option 2: There is a one-third chance that all individuals will be able to reduce cholesterol and a two-third chance that none of them will reduce cholesterol.

The participants were asked to rank their preference on a 7-point Likert scale with the definite selection of either option 1 or 2 at the ends of the continuum. The adverse scenario required the same type of response with differently framed options:

- Option 1: Two-thirds of individuals will fail in reducing the risk of heart disease,

– Option 2: There will be a one-third chance that none of the individuals will fail in reducing their cholesterol levels and a two-third chance that all individuals will fail in reducing the level of cholesterol.

The findings showed that risk-taking was greater when trying to avoid a loss than when trying to achieve gain. Furthermore, when looking at personality traits, individuals with low conscientiousness, high openness to experience and high extraversion generally exhibited a higher preference for risk than others (Harlow & Brown, 1990; Levin, Gaeth, Schreiber & Lauriola, 2002; Mishra & Lalumière, 2011; Wang, Xu, Zhang & Chen, 2016). In terms of domain-specific behaviours, Weller and Tikir (2011) found that social and recreational risk-taking as well as perceived benefits were associated with openness to experience, while high conscientiousness was associated with less perceived benefits.

2.4 Corporate Risk-Taking

Risk-taking is not only necessary from an individual perspective but also a corporative one. For corporations, engaging in risk-taking can be a value-added behaviour that plays a fundamental role in decision-making. It has crucial implications for the firm's outcomes and long-term survival (Sanders & Hambrick, 2007). Corporate risk-taking has been researched in terms of performance feedback, slack, top management incentive systems, managers' characteristics and environmental factors (Bromiley, 1991; Greve, 2003; Hoskisson, Hitt & Hill, 1993; Palmer & Wiseman, 1999; Rajgopal & Shevlin, 2002; Sanders, 2001; Singh & Harianto, 1989; Wright, Kroll, Krug & Pettus, 2007). In terms of managerial characteristics, researchers have looked into physical and psychological factors such as overconfidence, education, gender and personality (Bertrand & Schoar, 2003; Hilary & Hui, 2009; Malmendier, Tate & Yan, 2011). The previous chapter looked at some of these characteristics at an individual level; however, their impact on corporate risk-taking is explored here.

First, gender research suggests that women are more risk-averse than men, which leads to more prudent decision-making. Jianakoplos and Bernasek (1998) connected these findings to corporate risk-taking and discovered that an organisational structure leaning more towards women led to a lower level of corporate risk-taking. Similar findings were also confirmed by Lam, McGuiness and Vietto (2013).

The second factor to explore is age. The research on age suggests a positive correlation to risk aversion. Younger managers are less risk-averse than older managers due to their high growth orientation and lack of experience. These findings support the research on corporate risk-taking. An organisation with a broad composition of older managers will exhibit a lower level of corporate risk-taking than other organisations with younger managers on the board (Desai, 2008; Elsaid & Ursel, 2012; Farag & Mallin, 2018).

In the overview of the research literature on individual risky decision-making, the financial position of managers was also examined. Researchers found that managers who have a more secure financial position are willing to take on more risks as they are less afraid of losing their job or experiencing a negative impact on their firm's financial performance, as compared to managers of lower financial positions. Research on corporate risk-taking suggests that CEO compensation tied to firm performance lowers their risk tolerance and as such, has a positive effect on corporate risk aversion. However, when managers can diversify from firm-specific risks, they are more willing to make risky decisions on behalf of the firm, consequently lowering corporate risk aversion (Bolton, Mehran & Shapiro, 2015; Gande & Kalpathy, 2017; Gormley, Matsa & Milbourn, 2013).

Similarly, the research on individual risky decision-making found that personal experience (e.g., career background, marital status, educational background) can also influence corporate risk-taking. Specifically, managers with an MBA are risk-averse as their extensive knowledge enables them to use sophisticated project evaluation techniques. However, having more knowledge can lead to overconfidence, and hence lower risk aversion (Eisenhardt & Schoonhoven, 1990; Nicolosi & Yore, 2015; Roussanov & Savor, 2014).

Lastly, examining individual risk-taking literature on psychological factors, focussing on managers' overconfidence, optimism, hubris, narcissism, herd behaviour and cultural heritage (Gerstner, König, Enders & Hambrick, 2013; Heaton, 2002; Li & Tang, 2010), one of the cognitive biases – hubris or overconfidence – is hypothesised to encourage managers to overestimate their problem-solving capabilities and underestimate the resource requirements of risky projects and ambiguities that their firms are facing (Kahneman & Lovallo, 1993; Shane & Stuart, 2002). Some researchers also suggested that managers with narcissistic tendencies show lower risk-aversion than more people-oriented managers, thus increasing corporate risk-taking (Gerstner, König, Enders & Hambrick, 2013).

The findings on individual and corporate risk-taking confirm the influence of gender, age, financial position, education and personality differences on the level of risk propensity. Additionally, these differences are associated with decision-making and are implicitly tied to the financial performance of a company. Thus, the research aims to determine the differences in the risk propensity of managers in the selected Slovenian company, based on gender, age, financial position, education and personality as well as evaluate how these differences could influence investment decisions in the company.

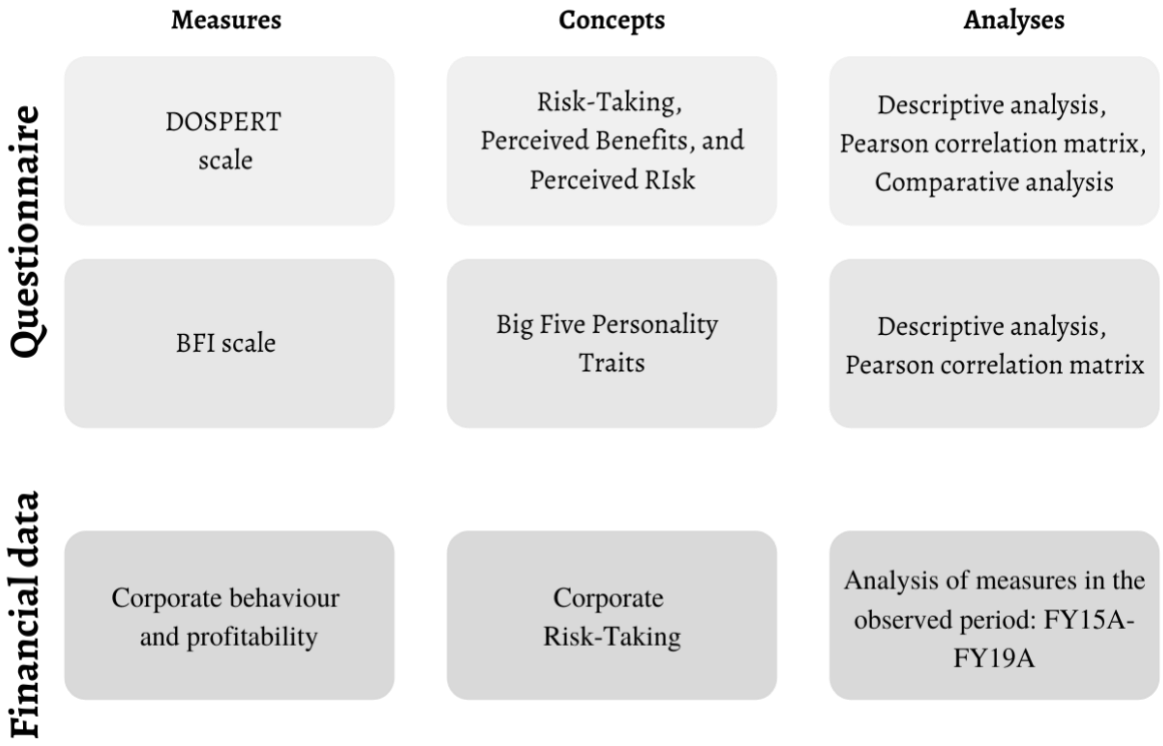
Research Question 1: How does risk propensity differ among managers in the selected Slovenian company based on gender, age, financial position, education and personality?

Research Question 2: How do the identified differences influence the investment decision process in the selected Slovenian company?

3 METHODOLOGY

The methods were chosen based on the literature review of the most common measurement tools for risk propensity, personality and corporate risk-taking. Risk propensity and personality measurement tools were administered through a questionnaire consisting of three sections: risk propensity, personality and demographics. The constructs measured throughout the thesis can be reviewed in Figure 2.

Figure 2: Summary of Research Design and Constructs Measured



Source: Own work.

3.1 Measures of Risk Propensity

The risk propensity of managers in the company was assessed using the well-established 30-item domain-specific risk-taking (hereinafter: DOSPERT) scale, developed by Blais and Weber (2006). Initially, the scale contained 40-items that were later revised in order to make it more applicable to a broader range of respondents of various cultural backgrounds. The new scale contains only 30-items with a 7-point Likert scale (previously a 5-point Likert scale). Additionally, all points on the response scale were labelled (Blais & Weber, 2006). To revise the old version of the scale, Blais and Weber (2006) used a group of 372 North Americans as a sample who were randomly splintered into two sub-groups. They administrated the groups with a new set of 48 items. In an exploratory manner, they analysed one sub-group, which resulted in a 30-item model. The new model was then tested on the

other sub-group using confirmatory factor analysis. The DOSPERT scale evaluates an individual's risk-taking tendency across five domains, consisting of six items: ethical, social, financial and health/safety (Blais & Weber, 2006).

The ethical risk domain subscale evaluates a person's unethical risk-taking behaviour, given a risky event (Blais & Weber, 2006). A significant relationship between dishonesty and ethical risk was found in a study conducted among 376 Israeli college students. Specifically, ethical risk seekers are aware of their dishonesty and do not feel ashamed about it (Zimerman, Shalvi & Bereby-Meyer, 2014). According to Blais and Weber (2006), an individual's willingness to risk their monetary earnings when gambling or undertaking investments can be evaluated using the financial risk domain subscale. The health and safety risk domain subscale evaluates an individual's willingness to take risks regarding their health or safety (e.g., would they be willing to walk at night in a crime-ridden neighbourhood). The willingness to partake in extreme hobbies (e.g., bungee jumping) or venturing on a vacation is measured by the recreational risk domain subscale, and since recreational activities require monetary funding, the domain is negatively correlated with the financial domain. Lastly, the social risk domain subscale evaluates a person's risk-taking behaviour when creating personal connections with others and mostly focusses on social problem-solving situations (Blais & Weber, 2006).

As reported by Blais and Weber (2006), the 30-item English risk-taking scores' reliability estimates ranged from 0.71 to 0.86, while for risk-perception it was 0.74 to 0.83. The original 48-item scale reported similar internal consistency estimates. Additionally, evidence was provided by Blais and Weber (2006) "for the factorial and convergent/discriminant validity of the scores with respect to constructs such as sensation seeking, dispositional risk-taking, intolerance for ambiguity, and social desirability" (p. 34).

The DOSPERT scale consists of three parts. First, using a 7-point rating scale ranging from 1 (Extremely Unlikely) to 7 (Extremely Likely), evaluating the behavioural intentions originating from the five domains. The second part measures risk-perception using a 7-point rating scale ranging from 1 (Not at all) to 7 (Extremely Risky) across all subscales. The third part assesses the respondent's belief about the expected benefit that can be obtained by engaging in risky behaviour across all five domains. It is measured by using a 7-point rating scale ranging from 1 (No Benefits at All) to 7 (Great Benefits). Domain-specific scores for risk-taking, risk perceptions and perceived benefits are created by averaging the participants' scores on the items in each domain, with higher scores indicating greater risk-taking in the domain of the subscale (see Table 1).

Table 1: Interpretation of Scores in DOSPERT

	Risk-averse	Midpoint	Risk seekers
Ethical	<3.5	3.5	>3.5
Financial	<3.5	3.5	>3.5
Health/Safety	<3.5	3.5	>3.5
Recreational	<3.5	3.5	>3.5
Social	<3.5	3.5	>3.5

Source: Blais & Weber (2006).

The DOSPERT scale is open-sourced and available online on the Columbia Business School webpage. Additionally, instructions for use and evaluation are also available for it to be used independently. For this research, the scale was translated to Slovene and adjusted for the differences in culture. Psychology or psychometry requires so-called validation when translating an established scale into another language and using it for psychological purposes. The validity of an established scale is required due to cultural differences that can impact the understanding of scale items (Valentin, 2000).

3.2 Measures of Personality

As one of the determinants of risk propensity can also be personality, I used the 44-item big five inventory (hereinafter: BFI) developed by John, Naumann and Srivastava (2008). It was developed to measure the big five dimensions, which are as follows:

- Extraversion,
- Agreeableness,
- Conscientiousness,
- Neuroticism,
- Openness.

Extraversion, as defined by John, Naumann and Srivastava (2008), includes traits such as "sociability, activity, assertiveness, and positive emotionality" (p. 138). Traits such as "altruism, tender-mindedness, trust, and modesty" are associated with the dimension Agreeableness (John, Naumann & Srivastava, 2008, p. 138). Conscientiousness "facilitates task- and goal-oriented behaviours such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing and prioritizing tasks" (John, Naumann & Srivastava, 2008, p. 138). While all dimensions are mostly linked to positive emotions, Neuroticism is associated with negative emotions such as feeling "anxious, nervous, sad, and tense" (John, Naumann & Srivastava, 2008, p. 138). Lastly, the fifth dimension Openness expresses the "breadth, depth, originality and complexity of an individual's mental

and experiential life" (John, Naumann & Srivastava, 2008, p. 138). It is connected to traits such as curiosity, imagination, artistic and unconventional.

The validity of the BFI has been tested in numerous studies, for example, Benet-Martinez and John (1998), John, Naumann and Srivastava (2008), Rammstedt and John (2007), Soto and John (2009), and Srivastava, John, Gosling & Potter (2003). Rammstedt and John (2007) used a sample of 726 students from a large public university to evaluate the BFI's stability across time. For an 8-week interval, the average correlation was 0.83. Srivastava, John, Gosling and Potter (2003) found that the alpha reliabilities were very similar to earlier data (Extraversion = 0.86, Agreeableness = 0.84, Conscientiousness = 0.79, Neuroticism = 0.80, and Openness = 0.80) in a substantial sample consisting 132,515 participants.

John, Naumann and Srivastava (2008) revealed that the item content of the BFI is related to many facets of the 240-item revised neuroticism-extraversion-openness personality inventory (hereinafter: NEO PI-R), which is the most widely used measure of the big five traits. Thus, Soto and John (2009) conceptually aligned the BFI to NEO PI-R by developing a 10-facet scale, which further specified the personality characteristics within each domain of the BFI. Consequently, they improved the validity of the BFI, making it a measure that is brief like the neuroticism-extraversion-openness five-factor inventory (hereinafter: NEO-FFI) – a 60-item alternative to the NEO PI-R but with less specific facet-level information. The latter two characteristics of the BFI are the main reasons why it was selected as a measurement of personality in the research. Since the primary participants are managers who have a busy work life, the BFI is a quicker alternative of measuring their personalities while also giving us an in-depth view of it.

The BFI was tested as an extra part of the questionnaire using a 5-point Likert scale ranging from 1 (Disagree Strongly) to 5 (Agree Strongly). The big five dimensions scores were obtained by averaging the items of a given domain with higher scores indicating the personality trait (see Table 2).

Table 2: Interpretation of Scores in BFI

Score	Interpretation
S ≥ 4.50	Extremely high on trait
4.00 ≤ S < 4.50	High on trait
3.50 ≤ S < 4.00	Somewhat high on trait
3.00 ≤ S < 3.50	Slightly high on trait
2.50 ≤ S < 3.00	Slightly to somewhat low on trait
S < 2.50	Somewhat to very low on trait

Source: John, Naumann & Srivastava (2008).

3.3 Demographic Questions

The demographic questions involved the participants' gender (Male, Female), age, education and personal income. The age of the respondents was evaluated using the following structure: 18–29 years, 30–39 years, 40–49 years and 65+. The education was structured into five degrees: Finished grade school (sl. Dokončana osnovna šola), Vocational school/High School (sl. Poklicna šola/Srednja šola), I. Bologna degree (sl. 1. bolonjska stopnja), University degree/II. Bologna degree (sl. Univerzitetna izobrazba/2. bolonjska stopnja), and master's degree/PhD (sl. Znanstveni Magisterij/Doktorat). Personal income, on the other hand, had five levels and represented the net pay-out as follows: from €667 to €1,114.16 (sl. od €667 do €1,114.16), above €1,114.16 to €2,228.34 (sl. nad €1,114.16 do €2,228.34), above €2,228.34 to €3.342.51 (sl. nad €2,228.34 do €3.342.51), above €3.342.51 to €5,570.85 (sl. nad €3.342.51 do €5,570.85) and more than €5,570.85 (sl. več kot €5,570.85). As the last question, the participants were asked about their perceived life expectancy to evaluate their general optimism. A higher perceived life expectancy indicated an optimistic personality.

3.4 Measures of Corporate Risk-Taking

The results of corporate risk-taking are reflected in:

- Corporate profitability,
- Corporate behaviour,
- Experiments or modelling (Bromiley, Miller & Rau, 2001).

In terms of corporate profitability, common proxies of corporate risk-taking can be the standard deviation of return-on-assets (hereinafter: ROA)/return-on-equity (hereinafter: ROE) and Tobin's Q (Benmelech & Frydman, 2015; Bromiley, Miller & Rau, 2001). The acquisition propensity, capital structure and R&D expenditure are common proxies of corporate risk-taking in terms of corporate behaviour (Coles, Naveen & Naveen, 2006; Hoskisson, Hitt & Hill, 1993). As for experiments or models, researchers either choose games or created new indexes to measure corporate risk-taking (Nakano & Nguyen, 2012; Xu & Zhang, 2009).

The thesis focusses on corporate profitability and behaviour methods. In terms of corporate profitability, the research examines the standard deviation of ROA and ROE as common proxies, while in terms of corporate behaviour, the capital structure and recent acquisitions are examined. A common threshold for the standard deviation of ROE and ROA used by researches is the industry average (Miller & Bromiley, 1990; Whalen, 2000), whereas for the capital structure, the threshold is 50 % as investors bear all business risks and some financial risks at that level of debt (Lee, Lee & Lee, 2008, p. 299). In terms of acquisitions, the thesis examines recent acquisitions with more than 70 % ownership stake. An acquisition is perceived to be risky when the new company has high debt levels, which the acquirer will

need to absorb, consequently increasing its debt-to-equity ratio (Sanders, 2001; Yim, 2013). As indicated in the literature review, corporate risk-taking often reflects the managers' risk propensity, and it is expected that the results will be similar.

3.5 Description of the Selected Company

The selected company is a medium sized company (around 250 employees). Its main activity is under the standard Slovenian classification of activities M 73.1 (Advertising activities). They offer mainly advertisement on radios and magazines that they own. As such, other activities include reporting, printing (they own a printing house), paper recycling, and entertainment (e.g. event planning, radio shows). The company was chosen due to the personal connection of the researcher to the CEO. It provided an easy access to managers in a specific Slovenian company. Due to the specific nature of the business, it is expected that managers risk propensity should be quite high in social risk-taking as managers past experience relates to selling. Based on personal experience, salespeople are usually quite extrovert and open to new experiences.

3.6 Sample

The sample includes managers from a Slovenian company, which was chosen based on the personal connections of the researcher, thus creating a sampling bias that could impact the validity of the results and findings. However, as the research is focusing on the effect of managers' risk propensity on investment decisions, sampling bias is unavoidable since even without personal connections, the sample would not be random. The randomness of the research could only have been assured by sending a request to all Slovenian companies and conducting the research with those who would positively respond.

The sample consists of 10 managers, which represents 45.5% of the total population (22 managers are employed by the selected Slovenian company). As such, the sample variability is informative of the general population the thesis is examining; however, the sample size limits the generalisability of the research (Hackshaw, 2008). Further research on the topic could gather the data of managers in a specific industry or Slovenia in general. The demographic characteristics of the sample are presented in the results section.

3.7 Research Design

Initially, a mixed-methods approach was designed, where the quantitative method (questionnaire) would be further validated through the analysis of the qualitative data (interview approach). The mixed methods would help yield a better understanding of managers' risk propensity and their decision-making regarding investment decisions. Such methods are especially important when the target population is small (Emerald Publishing, n.d.a). The interview would have taken place a month after the questionnaire survey when

the questionnaire data would be analysed, and more specific interview questions could be designed. A similar approach was used by Kolnhofer-Derecskei and Nagy (2016), Wilmes (2017), and Zhang (2016). However, as the COVID-19 pandemic reached its peak in March, the managers became increasingly hard to reach. As the selected Slovenian company is in the advertising industry, mainly radio and magazines, the company had to redesign itself by offering more digital advertising. Furthermore, as the situation with COVID-19 evolved through the following months, many employees as well as some of the mangers were put on hold due to cost-cutting. As such, the research design was changed to only incorporate the quantitative method (questionnaire).

The questionnaire was created and administrated through the 1ka portal (https://www.1ka.si) from 19 January 2020 to 7 February 2020. On 19 January 2020, a company-wide email addressed by the CEO (see Appendix 2) informed the managers about the research, and two follow up emails on 27 January and 3 February served as reminders. The questionnaire method was chosen because it is a quick, efficient and easy way of obtaining data, especially when analysing managers who have a hectic lifestyle. Additionally, it is a good method for obtaining data when the population sample is highly specific, e.g., from a specific company (Emerald Publishing, n.d.b). The complete questionnaire can be found in Appendix 3. Since not all questionnaires were fully answered, only 10 questionnaire results were included in the analysis.

The dataset was prepared and checked for missing values and outliers before analysing. The outliers were analysed using boxplots. Certain outliers were found for the domains of ethical risk-taking, social risk-taking, health risk-taking, financial expected benefit, agreeableness and consciousness. However, as the sample data is small, each respondent score gives us valuable information regarding the populations. Thus, according to Ziljstra, van der Ark and Sijtsma (2011), the outliers should not be removed but only detected. As such, the outliers are discussed through descriptive analysis.

The multiple imputation (regression method) in SPSS was used for missing values; it runs simulations relative to the available data in an attempt to replace the missing data that is most likely similar to the available data. The approach is widely advocated in social and health research because it results in valid statistical inferences by considering the uncertainty and natural variability of the missing data (Kang, 2013; van Ginkel, Linting, Rippe & van der Voort, 2020). Before multiple imputation, analysing the missing data to determine whether they follow a certain pattern is required. The findings indicate that seven out of 134 variables had missing values (0.522% of all values), and the missing values occurred in three of the 10 subjects. The pattern plot suggests that missing values are missing in a random way. Additionally, the pattern frequency plot tells us that the first pattern, the one in which no missing values are present across all variables, is the most prevalent, whereas the other patterns are much less prevalent but roughly equal (refer to Appendix 13 for the analysis of missing values).

Following Kang's (2013) instructions, the multiple imputation process was made. As multiple imputation goes through several iterations to impute missing variables, certain instructions for the SPSS on how to generate random iterations were required. The random number generators function was set to a Marsenne Twister active generator, with the starting point at a fixed value (the default setting of 2,000,000). After obtaining, the multiple imputation dataset, the mean values for risk-taking, perceived benefits and expected benefits were obtained for each scale and subscale, separately. Additionally, according to the BFI scoring instructions, the mean score for each personality dimension was obtained. The mean scores were obtained for both the imputed and original data. The pooled means (see Appendix 14) for each personality and risk domain indicated slight variations from the original mean estimates; the original data has been used for the descriptive analysis.

The original dataset was analysed using frequency tables. Based on frequencies, it was possible to categorise the variables of education and age into two groups. Furthermore, each domain-specific mean score was evaluated on individual and group levels for all three scales (risk-taking, perceived risk and expected benefits) as well as the personality domain mean scores.

Before conducting independent t-tests and correlation analyses, a normality test on the original data was performed. As multiple imputation preserves the distribution of original data (van Ginkel, Linting, Rippe & van der Voort, 2020), a normality test on imputations was not conducted. Next, the Pearson correlations for all scales and subscales were estimated on both the imputed and original data. Any significant differences are discussed in the section associations with risk-taking, risk perceptions, perceived benefits and personality dimensions.

Afterwards, an independent t-test was used to analyse meaningful differences across gender, age and education for all risk-taking domains as it can be applied to a dataset with lower than 30 observations. Moreover, as the sample is small, the research faces the problem of unreliable findings associated with low power. The common problem for such researches is the reliability of p-values, which often indicate no statistical significance (Button et al., 2013). The independent t-test was performed on both the imputed and original data. Any significant differences between the two datasets are discussed when analysing the differences among the previously mentioned groups. Additionally, for each group, a visual inspection of the mean scores for each risk-taking domain was performed.

Lastly, financial analysis of the selected Slovenian company, which operates within the advertising industry, was conducted. To start the financial analysis of the selected Slovenian company, financial statements for the period of FY15A to FY18A were obtained through the Slovenian portal Gvin (https://www.bisnode.si/produkti/bisnode-gvin/). A summary of the financial statements can be seen in Appendix 4. In order to determine the level of firm risk, a comparison to the industry average was needed. The industry average was obtained by ordering an aggregate analysis on the Slovenian platform Gvin, which presented data for

all Slovenian companies, excluding sole proprietorships within the standard classification of activities M 73.1 (Advertising activities) for the period of FY15A to FY18A. The snapshot of the aggregated analysis can be found in Appendix 5. Based on the analysed data, the corporate risk propensity was determined.

3.8 Research Ethics

Ethics are essential in terms of sampling, confidentiality, consent and research method. The confidentiality of respondents was ensured by omitting questions that could reveal their identity in the questionnaire. To mitigate the risk of having involuntary and coerced participation, the email sent from the CEO's email address was written and signed by the author. Furthermore, the email and introduction of the questionnaire made sure that each participant understood that their participation is not compulsory and that they can opt-out at any time. Both also included all other relevant information regarding the research design and method, such as the purpose of the research, the scale used, the time needed to answer and how the collected data will be used. It also included the author's contact details in case any additional questions arose.

The questionnaire was deployed through the online platform called 1ka, which raises additional confidentiality issues. While there are no identity-revealing questions, the internet protocol (hereinafter: IP) addresses could still be tracked to a user, thus settings were made to not collect the IP addresses of the respondents.

4 EMPIRICAL RESEARCH

The following chapter discusses the results of descriptive, comparative, and financial analyses.

4.1 Descriptive Analysis of Risk-Taking, Risk Perception, Perceived Benefits and Personality Traits

The demographic characteristics of the study sample are shown in Table 3. Most respondents (50 %) are between 30 and 39 years old. The sample consisted of more males (N = 8, 80 %) and people with a University degree/II. Bologna degree (N = 4, 40 %). Out of ten respondents, only six were willing to share their income range. The most common personal income range is above €2,228.34 to €3.342.51.

Table 3: Demographic Characteristics of the Study Sample (N=10)

Variable	% (frequency)
Age	
18-29 years	10 (1)
30-39 years	50 (5)
40-49 years	30 (3)
50-65 years	10 (1)
Gender	
Female	20 (2)
Male	80 (8)
Education	
Vocational school/High school	30 (3)
I. Bologna degree	20 (2)
University degree/II. Bologna degree	40 (4)
Master's degree/PhD	10 (1)
Personal income (N=6)	
Above €1,114.16 up to €2,228.34	16.7 (1)
Above €2,228.34 up to €3.342.51	66.7 (4)
Above €3.342.51 up to €5,570.85	16.7 (1)

Source: Own work.

Table 4 shows the individuals' average domain risk-taking scores as well as their total risk-taking scores. The risk-taking was measure through the 7-point Likert scale. Based on the data presented below, only one person (P5) shows a high tendency for unethical risk-taking behaviour, while others are risk-averse. The same person also exhibits the highest risk-seeking behaviours when faced with health concerning decisions and social problem-solving situations. On the other hand, he exhibits one of the lowest scores in the recreation risk domain subscale. P2 and P9 have the lowest score in the ethical risk domain. P2 has the highest score in social risk domain, while P9 is, in general, the least risk-seeking person among the sampled group. In the financial risk domain, P4 and P7 have the highest score. P7 exhibits a high-risk propensity for the social risk domain, while P4 is otherwise moderately risk-averse. P6 has the highest score in the recreation risk domain. Besides being a significant recreational risk seeker, P6 is also a considerable social risk seeker. On average, the group exhibits a risk-seeking behaviour in the social and recreational domains, while in others, they are relatively risk-averse. Overall, the group shows an average of risk-seeking behaviour.

Table 4: The Domain and Total DOSPERT Risk-Taking Score of the Study Sample (N=10)

Person (P)	Ethical	Finance	Health/Safety	Recreation	Social
P1	2.00	2.00	3.00	4.83	4.17
P2	1.50	3.67	3.83	2.67	6.33
P3	2.00	2.17	2.67	5.00	5.50
P4	2.67	4.50	3.50	2.33	2.83
P5	5.00	3.17	5.17	1.00	5.33
P6	2.33	3.33	3.50	6.33	6.17
P7	2.83	4.50	3.17	3.50	5.17
P8	1.00	2.33	2.20	5.17	5.50
P9	2.83	4.17	3.17	2.67	4.83
P10	3.33	3.50	3.00	3.17	5.33
Mean (SD)	2.55 (1.10)	3.33 (0.93)	3.32 (0.79)	3.67 (1.62)	5.12 (1.01)

Source: Own work.

Table 5 shows the individuals' average domain risk perception scores. Risk perception was measured by using a 7-point Likert scale. On average, the majority (70 %) perceived unethical behaviour as risky. Only one was risk-neutral towards unethical behaviour, most of them (80 %) perceived financial and unhealthy behaviours as risky, on average. In terms of recreational and social behaviour, 60% of participants perceived it as risky, on average. In general, all domain behaviours were perceived as risky; however, social behaviours seem to be the least risky, according to the respondents.

Table 5: The Domain DOSPERT Risk Perception Score of the Study Sample (N=10)

Person (P)	Ethical	Finance	Health/Safety	Recreation	Social
P1	4.83	5.17	4.00	3.50	3.83
P2	1.33	4.00	3.50	2.00	6.67
P3	4.33	5.33	3.83	2.83	1.83
P4	3.50	4.17	3.83	5.50	3.00
P5	4.83	3.00	2.00	6.17	4.33
P6	6.00	5.17	5.50	4.00	4.00
P7	4.50	5.17	5.83	4.00	4.33
P8	6.00	5.17	5.20	3.50	2.33
P9	3.33	3.33	4.67	5.67	2.33
P10	5.33	4.00	5.67	4.33	3.67
Mean (SD)	4.40 (1.40)	4.45 (0.86)	4.40 (1.20)	4.15 (1.31)	3.63 (1.39)

Source: Own work.

Table 6 shows the individuals' average domain perceived benefit scores. The perceived benefits were measured by using a 7-point Likert scale. All of them perceive the benefits of engaging in risky unethical and unhealthy behaviours as low. In terms of engaging in risky financial behaviour, only two believe that such behaviour can bring positive benefits. More than half (60 %) believe that risky recreational behaviour brings more disadvantages than

benefits. Overall, participants believe that engaging in risky behaviour does not bring substantial benefits, except when engaging in risky social behaviours.

Table 6: The Domain DOSPERT Perceived Benefits Score of the Study Sample (N=10)

Person (P)	Ethical	Finance	Health/Safety	Recreation	Social
P1	2.83	3.00	2.67	3.67	3.33
P2	1.17	3.00	1.67	2.17	6.67
P3	1.67	2.83	1.17	4.67	5.33
P4	3.50	5.33	2.50	1.00	3.17
P5	3.00	1.33	2.00	1.00	4.50
P6	1.50	3.33	2.67	5.33	5.50
P7	2.17	3.67	1.67	3.00	3.83
P8	1.00	2.33	1.20	4.50	4.17
P9	2.50	2.00	1.17	1.33	3.33
P10	1.33	2.50	1.33	2.33	4.83
Mean (SD)	2.07 (0.86)	2.93 (1.08)	1.80 (0.62)	2.90 (1.59)	4.47 (1.13)

Source: Own work.

Table 7 exhibits individuals' average scores across the big five dimensions, which were measure by using a 5-point Likert scale. Out of 10 people, half showed signs of being highly extrovert. The majority of respondents (80 %) could be defined as agreeable and conscientious, and more than half (60 %) were only slightly neurotic. All of them are curious, imaginative, artistic, and unconventional in nature. On average, the group of managers exhibits more of an extraverted personality coupled with agreeableness, openness and conscientiousness, while exhibiting a calmer personality.

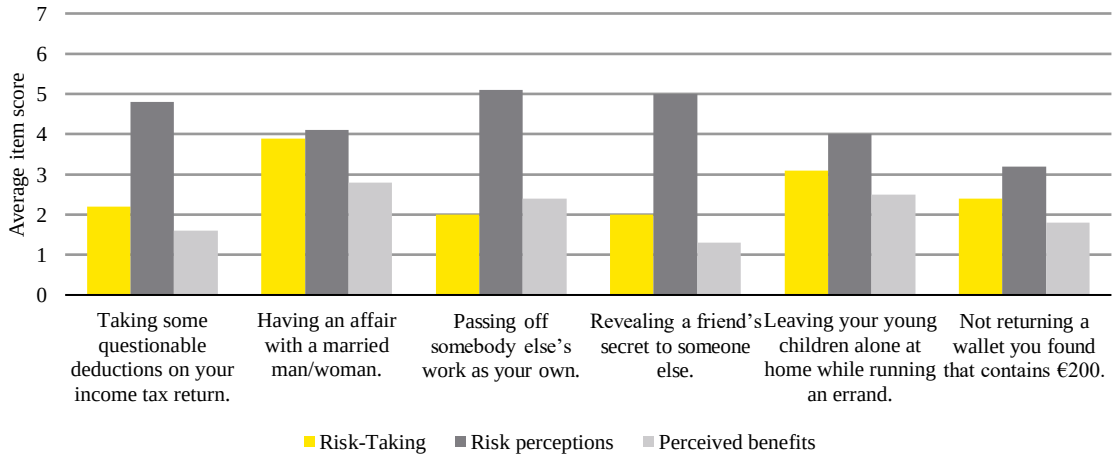
Table 7: The Big Five Dimensions Average Score of the Study Sample (N=10)

Person (P)	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
P1	3.88	3.22	3.89	2.63	3.30
P2	4.75	4.11	3.78	1.75	3.80
P3	3.00	3.78	3.89	1.50	3.40
P4	3.50	3.89	3.78	3.25	3.10
P5	4.75	3.56	2.63	2.75	4.40
P6	2.88	3.89	3.33	3.13	3.90
P7	3.50	4.44	4.56	1.25	3.90
P8	4.63	2.89	3.67	3.88	4.10
P9	4.13	3.78	4.11	3.25	5.00
P10	4.14	3.56	3.89	2.88	3.60
Mean (SD)	3.91 (0.69)	3.71 (0.44)	3.75 (0.50)	2.63 (0.86)	3.85 (0.56)

Source: Own work.

Figure 3 shows the average item scores within the ethical risk domain for all three categories of the DOSPERT scale. Looking at risk-taking item scores, it can be noted that, on average, more participants expressed their intentions towards engaging in an affair with a married man/woman than any other unethical behaviour. The participants believed this behaviour to bring the most benefits, while the least likely behaviours to bring benefits seemed to be taking questionable deductions on their income tax returns and revealing a friend's secret to someone else. The participants were least likely to pass off somebody else's work as their own or reveal a friend's secret to someone else. These two items were perceived to be the riskiest behaviours within the ethical domain. The participants believed that not returning a found wallet with €200 is the least risky behaviour among unethical behaviours.

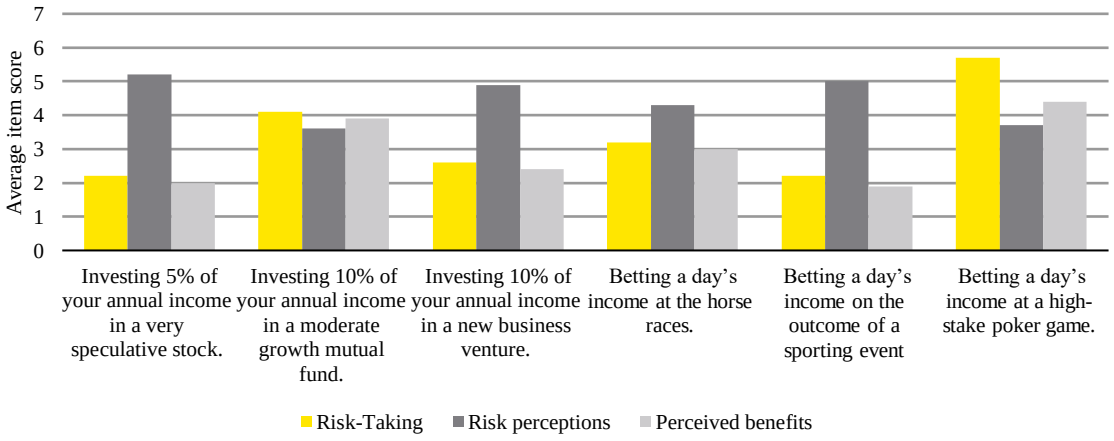
Figure 3: The average item scores within ethical risk domain for all three categories of DOSPERT scale (N=10)



Source: Own work.

Average item scores within the financial risk domain for all three categories of the DOSPERT scale are shown in Figure 4. The participants were likely to bet a day's income at a high-stakes poker game and invest 10 % of their annual income in a moderately growing mutual fund. Both behaviours were perceived to bring the most benefits, compared to other behaviours within the financial risk domain. The respondents were least likely to bet a day's income on the outcome of a sporting event and invest 5 % of their annual income in a very speculative stock. Both behaviours were perceived to bring the least benefits within the financial risk domain. In general, the participants evaluated all behaviours within the financial risk domain as risky. Investing 5 % of their annual income in a very speculative stock was evaluated as the riskiest behaviour among the risky financial behaviours.

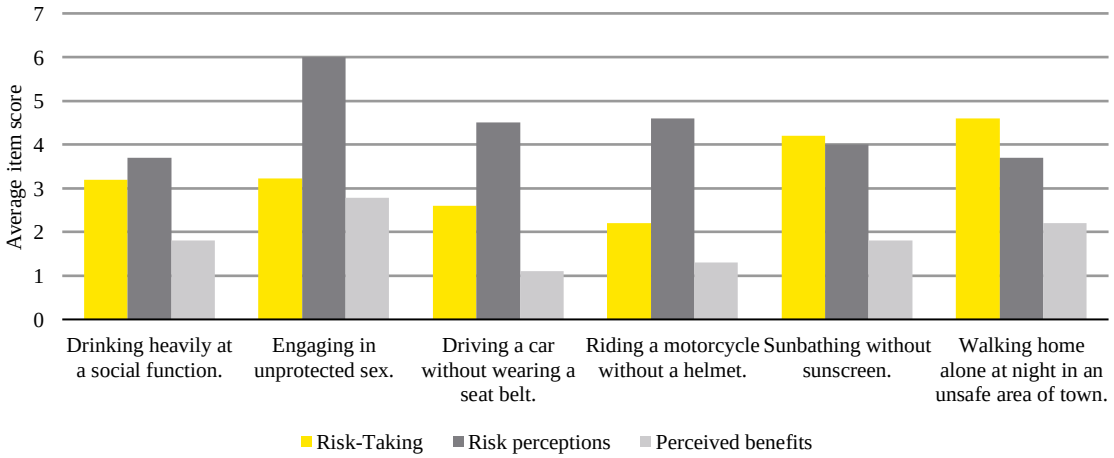
Figure 4: The average item scores within financial risk domain for all three categories of DOSPERT scale (N=10)



Source: Own work.

Figure 5 shows the average item scores within the health/safety risk domain for all three categories of the DOSPERT scale. The participants were likely to sunbathe without sunscreen and walk home alone at night in an unsafe area of a town; however, they were less likely to drive a car without wearing a seatbelt or ride a motorcycle without a helmet. The latter two behaviours are perceived to be the least beneficial to an individual, while the former two are perceived as the least risky behaviours. Engaging in unprotected sex is perceived as the most beneficial and riskiest behaviour among social risk behaviours.

Figure 5: The average item scores within health/safety risk domain for all three categories of DOSPERT scale (N=10)

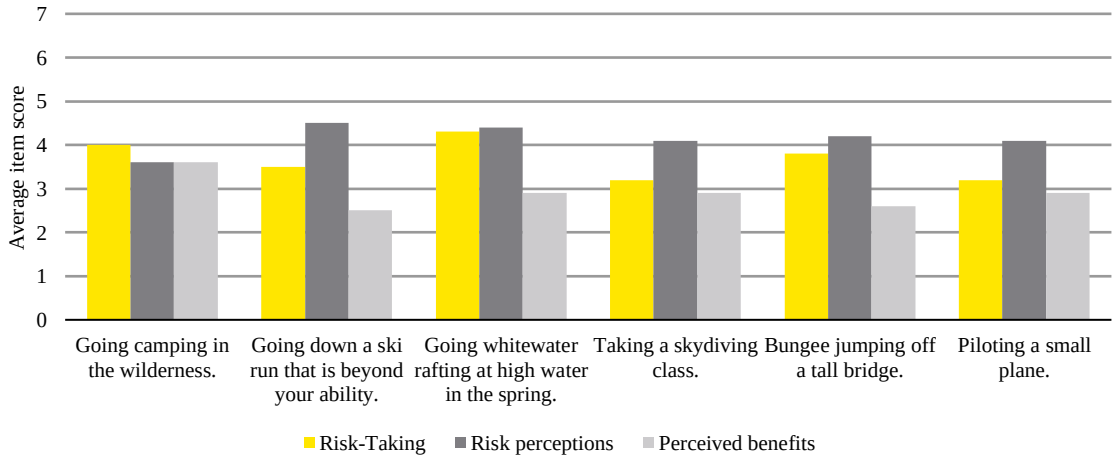


Source: Own work.

Average item scores within the recreational risk domain for all three categories of the DOSPERT scale are shown in Figure 6. The respondents were likely to go Whitewater

rafting at high water in spring and camping in the wilderness, whereas they were less likely to take a skydiving class or pilot a small plane. The respondents perceived skiing down a ski path beyond their abilities and Whitewater rafting at high water in the spring as the riskiest behaviours. In terms of perceived benefits, the least beneficial behaviours were skiing down a ski path beyond their abilities and bungee jumping off a tall bridge. The most beneficial behaviour was camping in the wilderness.

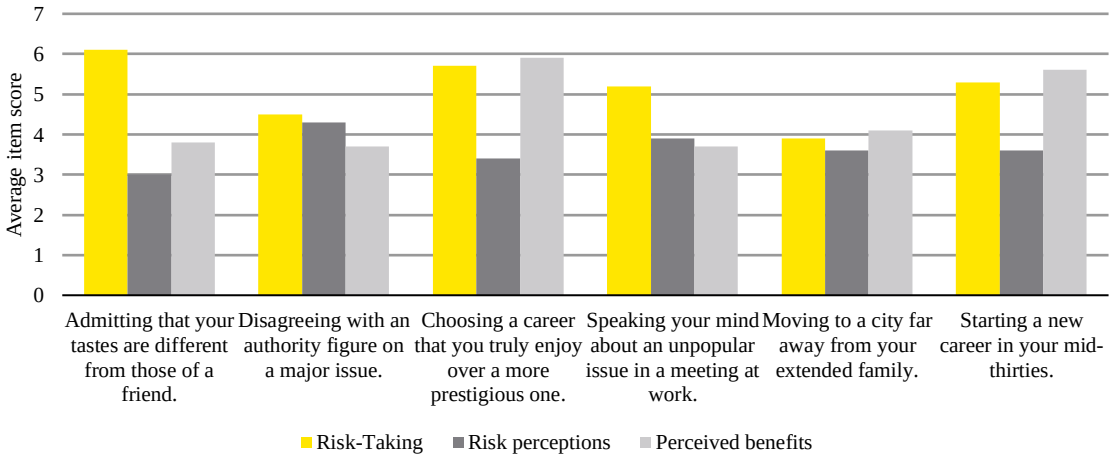
Figure 6: The average item scores within recreational risk domain for all three categories of DOSPERT scale (N=10)



Source: Own work.

Figure 7 exhibits the average item scores within the social risk domain for all three categories of the DOSPERT scale. The likeliest behaviours in which the respondents would prefer to engage were admitting that their tastes are different from those of a friend, choosing a career that they genuinely enjoy over a more prestigious one and starting a new career in their mid-thirties. The first was seen as the least risky behaviour, while the last two were perceived as the most beneficial within the social risk domain. The least beneficial behaviours were speaking your mind about an unpopular issue in a meeting at work and disagreeing with an authority figure on a significant issue – the latter was seen as the riskiest behaviour.

Figure 7: The average item scores within social risk domain for all three categories of DOSPERT scale (N=10)



Source: Own work.

The results indicate that managers in the selected Slovenian company are generally semi-strong risk-takers. Particularly, they take more risks when faced with a social decision (e.g., admit your tastes are different, disagree on a critical issue) which have the lowest risk perception and higher perceived benefits. The results are in line with the findings of Weber, Blais and Betz (2002). Based on the literature review in previous chapters, the semi-strong risk propensity should be reflected in corporate risk-taking tendencies.

4.2 Normality Test

As many parametric tests assume the data is normally distributed or has a Gaussian distribution, a normality test is required. When the data is not normally distributed, the validity of the parametric tests becomes unreliable and accurate conclusions cannot be drawn. A sampling distribution is considered normal when the data set is approximately normal (Ghasemi & Zahediasl, 2012). As the sample is small (less than 30 data points), the normality test is essential for our research. A normality test can be checked using SPSS in the following two ways (Ghasemi & Zahediasl, 2012):

- Using a normality test (e.g., the Kolmogrov-Smirnov test, Anderson-Darling test, Shapiro-Wilk's test)
- Visual inspection of distribution in a histogram, normal Q-Q plots and box plots.

For the normality test, researchers recommend using the Shapiro-Wilk's test as it is based on the correlation between the data and the corresponding normal scores. As such, for the normality test in this research, the Shapiro-Wilk test was examined, where a significant result ($p < 0.05$) suggests a non-normal distribution, which is when the histogram, normal Q-Q

plots and box plots were visually inspected. In the case of a non-normal distribution, the data needs to be standardised (Ghasemi & Zahediasl, 2012).

As seen in Table 8, the Shapiro-Wilk's test indicates that all DOSPERT and BFI dimensions are approximately normally distributed, as the p-value is greater than 0.05. Thus, standardisation of data is not required. The normality based on each dependent variable (gender, age, education) was also analysed. The findings show that each group of dependent variables is approximately normally distributed, based on the Shapiro-Wilk's test. A non-normal distribution was found only for extraversion when observing the group of older managers. However, upon visual inspection of histograms and box plots, it was concluded that the distribution is approximately normally distributed. The output data regarding normality can be found in Appendix 11.

Table 8: Shapiro-Wilk's Test for DOSPERT and BFI Dimensions Provided by SPSS (N=10)

	Statistic	Df	Sig.
Risk-taking	0.939	10	0.547
Risk-perception	0.971	10	0.899
Expected benefits	0.973	10	0.917
Extraversion	0.922	10	0.372
Agreeableness	0.971	10	0.899
Conscientiousness	0.894	10	0.188
Neuroticism	0.925	10	0.400
Openness	0.955	10	0.732

Source: Own work.

4.3 Associations between Risk-Taking, Risk Perceptions, Perceived Benefits and Personality Dimensions

To better understand the results, the correlations between risk-taking, risk perception and perceived benefits among the risk domains as well as the average scores of items within a specific domain need to be looked at. Table 9 exhibits the correlations between risk-taking, risk perceptions and perceived benefits. Managers with a higher ethical risk-taking score show lower risk perception about financial decisions and higher risk perception regarding recreational decisions. Managers who believe engaging in unethical risk behaviours is beneficial, perceive recreational risk behaviours as risky. Respondents who have a high health/safety risk-taking score, perceive financial and health/safety risk behaviours as safe. High social risk-taking scores are a sign of high perceived benefits in terms of social risk behaviour and low perceived benefits for ethical risk behaviours. Higher the recreational risk-taking, the less beneficial the behaviour seems to be. On the other hand, higher the risk-taking and perceived benefits of recreational risk behaviours, the riskier is the financial risk behaviour. Pooled correlations show similar data (see Appendix 15).

Table 9: Correlations between Risk-Taking, Risk Perceptions, and Perceived Benefits (N=10)

Scale	Ethical	Financial	Health/safety	Recreational	Social
	Risk-taking scales				
Risk perceptions					
Ethical	**.115**	-.415	-.268	.526	.061
Financial	-.670*	**-.434**	-.688*	.869**	.093
Health/safety	-.376	.194	**-.684***	.561	.144
Recreational	.769**	.430	.466	**-.549**	-.500
Social	.082	.261	.549	-.297	**.373**
Perceived benefits					
Ethical	**.532**	.290	.452	-.504	-.809**
Financial	-.303	**.414**	-.199	.136	-.557
Health/safety	.121	.031	**.375**	.125	-.361
Recreational	-.594	-.612	-.579	**.962****	.449
Social	-.196	-.171	.177	.160	**.816****
	Perceived benefits scale				
Risk perceptions					
Ethical	**-.139**	-.197	.120	.546	-.241
Financial	-.361	**.382**	.135	.869**	.052
Health/safety	-.481	.229	**-.183**	.463	-.099
Recreational	.695*	-.104	.156	**-.616**	-.624
Social	-.135	.029	.312	-.225	**.533**

Within-domain correlations are in bold.
*p < 0.05, **p<0.01

Source: Own work.

Table 10 presents the correlations between personality dimensions, risk-taking, risk perceptions and perceived benefits. Conscientiousness is negatively correlated with ethical and health/safety risk-taking. Thus, when a person is a high ethical or health/safety risk-taker, they will have low conscientiousness. On the other hand, conscientiousness is positively correlated to recreational risk-taking and perceived benefits. As such, respondents who are recreational risk-takers, or perceive recreational risk-taking as highly beneficial, have high conscientiousness. Extraverted managers exhibit high-risk perception in terms of social risk behaviours, while those with high conscientiousness have high-risk perceptions about financial and health/safety risk-taking. Neurotics perceive the benefits of social risk behaviours as low. Pooled correlations show similar data (see Appendix 15).

Table 10: Correlations between Personality Dimensions, Risk-Taking, Risk Perceptions, and Perceived Benefits (N=10)

	DOSPERT scales				
Personality dimensions	**Ethical**	**Financial**	**Health/safety**	**Recreational**	**Social**
	Risk-taking				
Extraversion	.219	.099	.442	-.374	.297
Agreeableness	-.256	.010	.086	.217	.303
Conscientiousness	-.740*	-.214	-.672*	.861**	.170
Neuroticism	.228	.423	-.109	-.429	-.531
Openness	-.007	-.125	.020	.029	.503
	Risk perception				
Extraversion	-.082	-.166	-.168	-.143	.750*
Agreeableness	-.146	-.130	-.084	-.095	.026
Conscientiousness	.296	.772**	.670*	-.591	-.100
Neuroticism	.081	-.192	.216	.483	-.189
Openness	.356	-.060	.108	.059	.005
	Perceived benefits				
Extraversion	-.144	-.163	.074	-.220	.282
Agreeableness	-.303	.050	.098	.163	.504
Conscientiousness	-.542	.458	.183	.766**	.243
Neuroticism	.380	.093	-.184	-.483	-.755*
Openness	-.411	-.570	-.383	.156	.090

*p < 0.05, **p<0.01

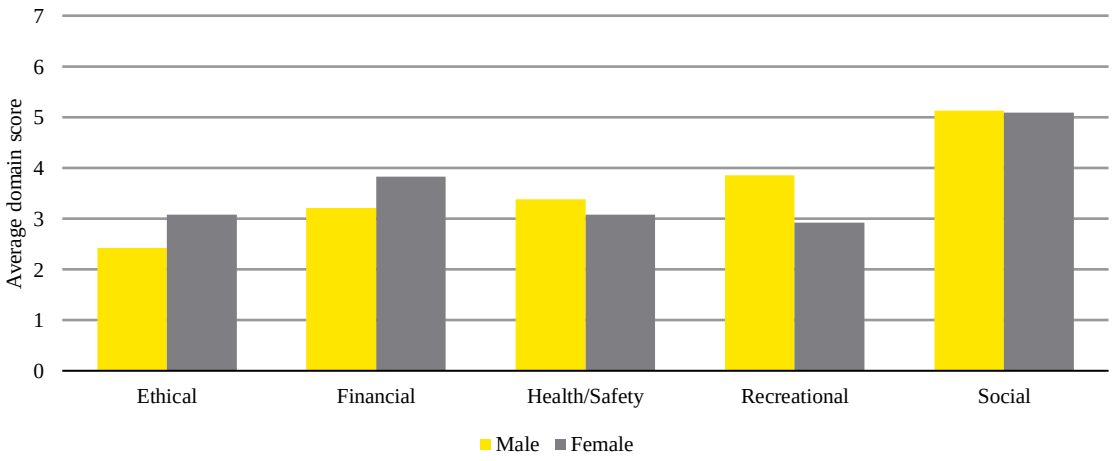
Source: Own work.

The findings partially contradict Nicholson, Soane, Fenton-O'Creevy and William (2005), who found that low conscientiousness is associated with higher risk propensity in all five decision domains. Although the results might suggest that the relationship between agreeableness and risk-taking is positive, based on the findings of similar studies (e.g. Nicholson, Soane, Fenton-O'Creevy and William (2005)), a more plausible explanation is that lower agreeableness supplies the motivational force for risk-taking. In general, managers scored high in extraversion, agreeableness, conscientiousness and openness, while scores for neuroticism were low on average. High extraversion and openness, coupled with low neuroticism are the motivational force for the identified semi-strong managers' risk propensities.

4.4 Gender Differences in Risk-Taking

In Figure 8, the difference in average domain risk-taking scores between genders is presented. Females exhibited a higher average domain risk score in the ethical and finance domains as compared to males. However, when looking at the average risk-taking score, females were more risk-seeking than males. To determine whether there are any significant differences in risk-taking between males and females, an independent t-test was conducted. It was found that at 5 % level of significance, gender has no significant impact on risk-taking scores: $t(7.8) = -0.021$, $p = 0.984$. The same was found for the domain risk-taking scores: $t_{ethical}(6.9) = -1.352$, $p_{ethical} = 0.219$, $t_{financial}(3.8) = -1.292$, $p_{financial} = 0.270$, $t_{heealth/safety}(7.8) = 0.911$, $p_{health/safety} = 0.390$, $t_{social}(6.6) = 0.088$, $p_{social} = 0.932$, $t_{recreational}(8.0) = 1.386$, $p_{recreational} = 0.203$. The results of the independent t-test are presented in Appendix 12. The pooled t-test estimates yielded the same results (see Appendix 12).

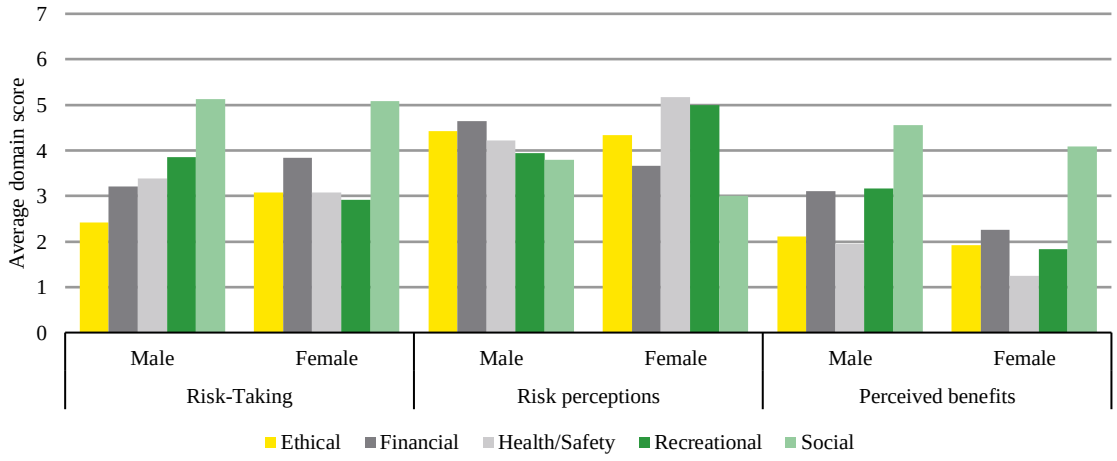
Figure 8: The average domain risk-taking score of the study sample by gender (N=10)



Source: Own work.

To evaluate the differences and similarities between female and male managers, a comparative analysis was conducted. The differences in average risk-taking, perceived benefits and risk perception between female and male managers for each risk domain are shown in Figure 9. In terms of risk-taking, both female and male managers exhibited a high willingness to engage in risky social behaviours. Male managers were more likely to engage in risky recreational behaviour than female managers, whereas female managers were more likely to engage in financial risk-taking. Female managers perceived recreational and health/safety behaviours as the riskiest, while for male managers it was financial and ethical behaviours. Both female and male managers believed that engaging in risky social behaviour is most beneficial, whereas engaging in risky health/safety behaviour is the least beneficial.

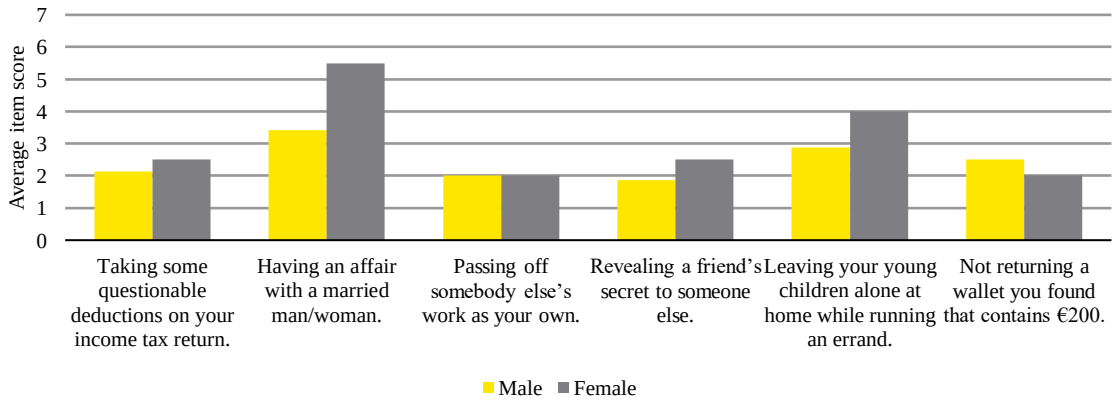
Figure 9: The average scores within risk domains for all three categories of DOSPERT scale by gender (N=10)



Source: Own work.

In the following paragraphs, the differences between males and females in average item scores for the ethical, financial and social risk-taking domains are evaluated. The differences in the other two domains are presented in Appendix 6. Figure 10 shows the average item scores' differences between female and male managers within the ethical risk-taking domain. Female managers are more likely to have an affair with a married man/woman, leave their young children alone at home while running an errand, take some questionable deductions on their income tax returns and reveal a friend's secret to someone as compared to male managers. It is equally likely for both groups to be passing off somebody else's work as their own.

Figure 10: The average item scores within ethical risk-taking domain by gender (N=10)

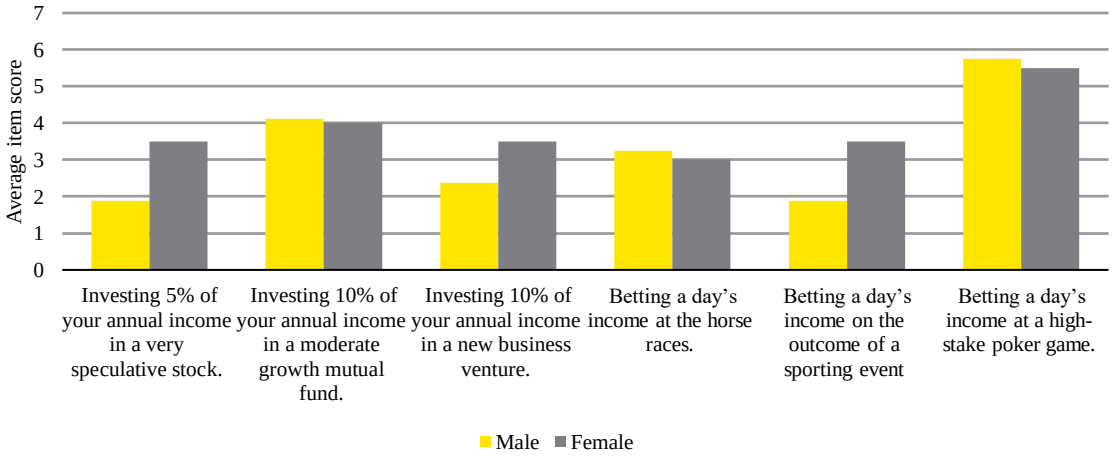


Source: Own work.

In Figure 11, the differences in average item scores between female and male managers within the financial risk-taking domain can be seen. Male managers are more likely to invest

10 % of their annual income in a moderate growth mutual fund, bet their day's income at a horse race and a high-stakes poker game than female managers.

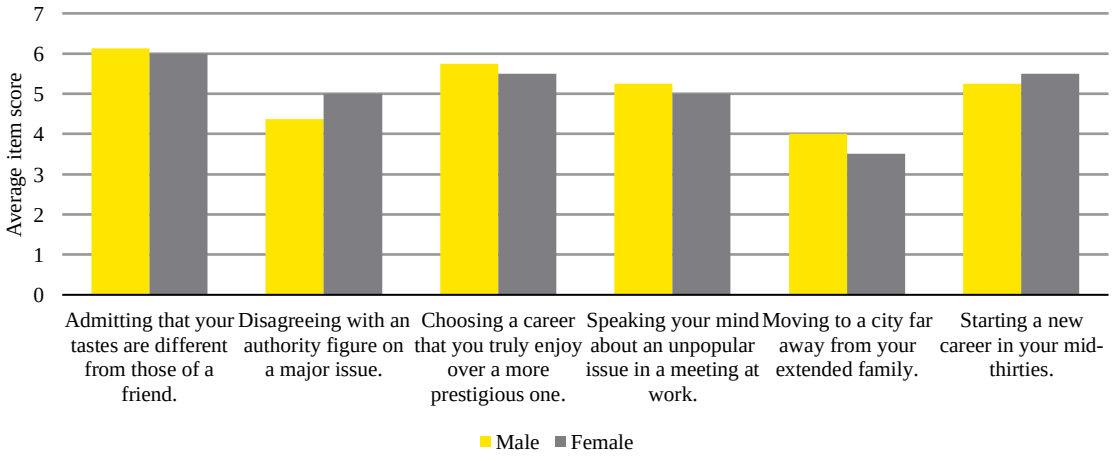
Figure 11: The average item scores within financial risk-taking domain by gender (N=10)



Source: Own work.

Lastly, the differences in average item scores between female and male managers within the social risk-taking domain were evaluated (see Figure 12). Female managers are more likely to disagree with an authority figure on a significant issue and start a new career in their thirties than male managers. Both female and male managers do not fear to admit that their tastes are different from those of a friend.

Figure 12: The average item scores within social risk-taking domain by gender (N=10)



Source: Own work.

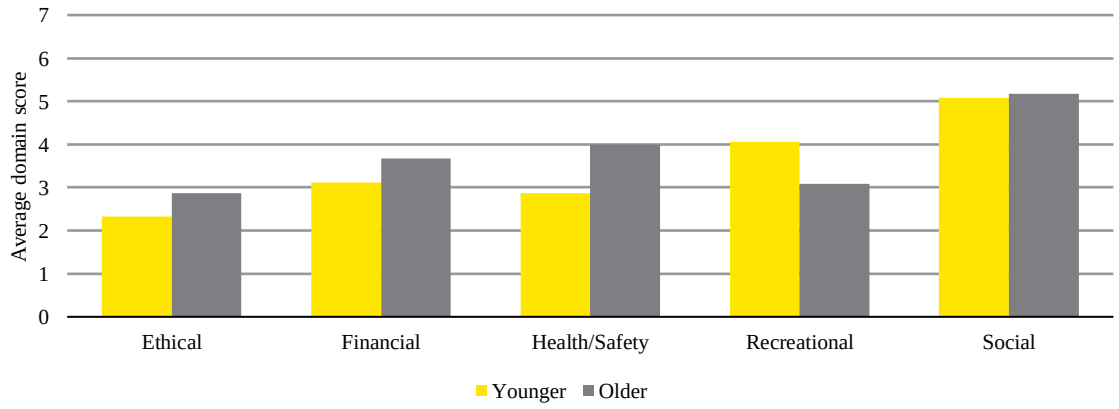
The results indicate that male and female managers differ in risk propensity for all decision domains except social; however, males are overall more risk-prone than females. The findings are in line with Weber, Blais and Betz's (2002) research as well as Lam, McGuiness

and Vietto's (2013). Female managers are more prone to take risks when making financial and ethical decisions. In terms of corporate decision-making, such behaviour could negatively impact the company's reputation and financial well-being. One prime example of high-risk propensity for unethical behaviour is the Wells Fargo scandal, where managers pressured bank clerks to open fraudulent accounts to get paid commissions (Kelly, 2020). As for males, the more concerning risk tendencies are within the social decision domain. The findings indicate that males are more likely to admit their tastes are different and disagree on an unpopular issue in a meeting at work. Such tendencies could be useful for opening discussions in a meeting, as voicing opinions without fear promotes diversity, which is positively correlated to innovation and financial performance (Lorenzo & Reeves, 2018). Thus, a firm's specific risk-taking is expected to be positively impacted, despite the higher risk propensity in males due to the high social risk-taking domain scores.

4.5 Age Differences in Risk-Taking

For the analysis, the managers have been grouped into two categories: younger (18–39 years) and older (39+ years). Figure 13 shows the comparison of the average domain risk-taking scores among the two categories. An independent t-test was conducted to determine whether there were any statistically significant differences between the two groups. It was found that at 5 % level of significance, age had no significant impact on risk-taking scores: $t(4.0) = -1.005$, $p = 0.372$. The same was found for the domain risk-taking scores: $t_{ethical}(4.3) = -0.658$, $p_{ethical} = 0.545$, $t_{financial}(8.0) = -0.921$, $p_{financial} = 0.384$, $t_{heealth/safety}(3.9) = -2.666$, $p_{health/safety} = 0.057$, $t_{social}(3.4) = -0.100$, $p_{social} = 0.926$, $t_{recreational}(3.9) = 0.795$, $p_{recreational} = 0.472$. The results of the independent t-test are presented in Appendix 12. If a 10% significance level were to be assumed, a statistically significant difference would be found in the health or safety risk-taking domain. The pooled t-test estimates yielded a similar result, except for the health and safety risk-taking domain, which was found to be statistically significant at the 5% level of significance (see Appendix 12).

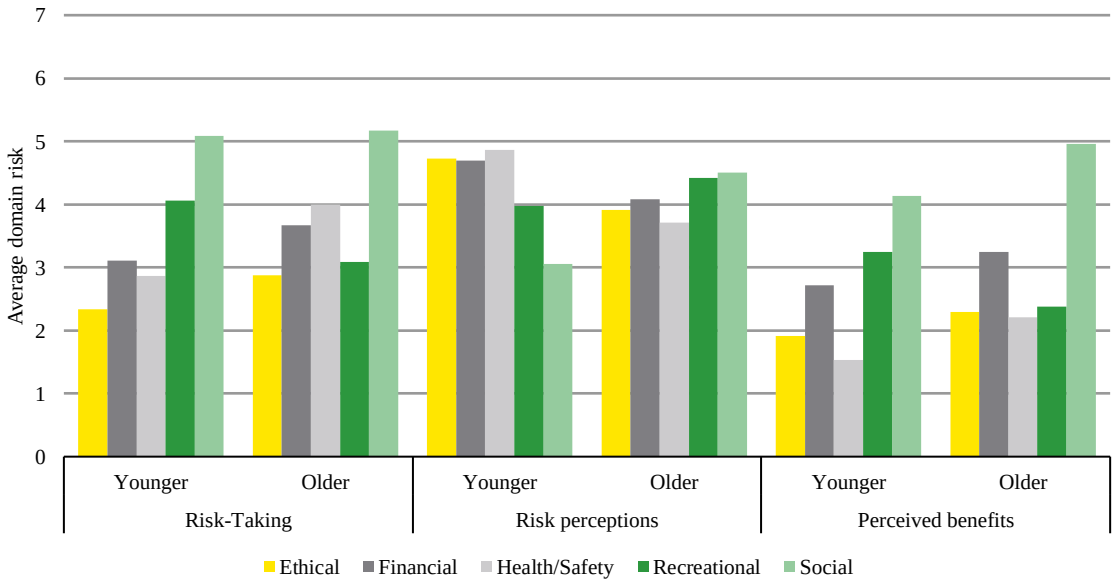
Figure 13: The average domain risk-taking score of study sample by age group (N=10)



Source: Own work.

The same approach as for gender was used to evaluate the differences between younger and older managers. Based on data presented in Figure 14, it can be noted that both older and younger managers are more willing to engage in risky social behaviour, which is also perceived to be the most beneficial. Younger managers perceive unethical and risky financial behaviours as well as engagement in risky health/safety behaviour as riskier than older managers. Thus, it is unsurprising that older managers are more willing to engage in such behaviour as compared to younger managers. Engaging in such behaviour is viewed as the least beneficial behaviour by both.

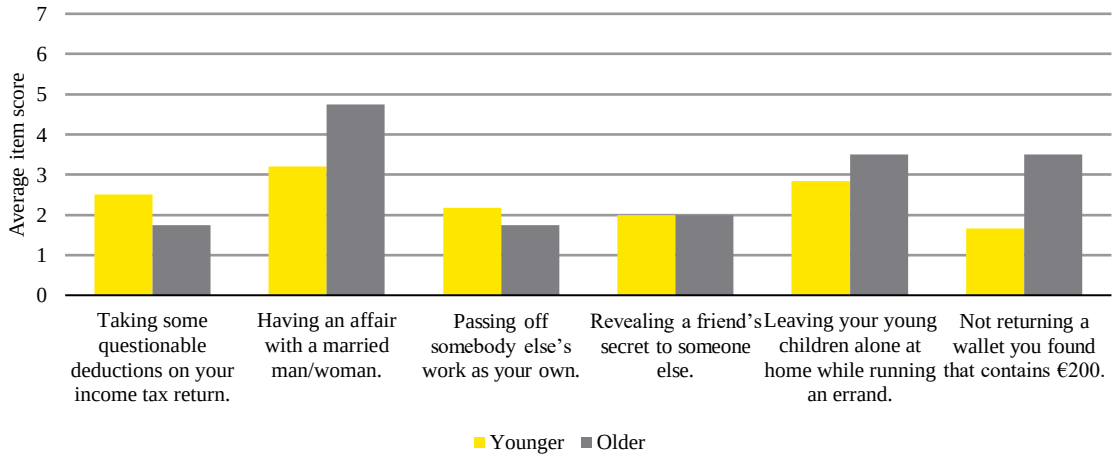
Figure 14: The average scores within domain risk for all three categories of DOSPERT scale by age group (N=10)



Source: Own work.

In the following paragraphs, the age differences in average item scores for ethical, financial and social risk-taking domains are evaluated. The differences in the latter two domains are presented in Appendix 7. Figure 15 exhibits the average item score differences between younger and older managers within the ethical risk-taking domain. Older managers are more willing to have an affair with a married man/woman, leave their young children alone at home while running an errand and keep a found wallet containing €200 than younger managers. Both groups are equally likely to reveal a friend's secret to someone else.

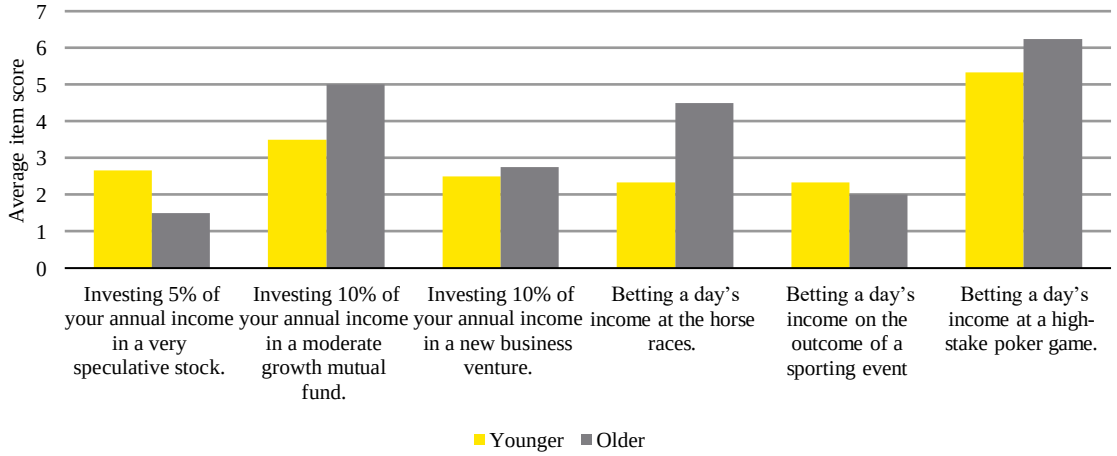
Figure 15: The average item scores within ethical risk-taking domain by age group (N=10)



Source: Own work.

Figure 16 shows the differences in average item scores between younger and older managers within the financial risk-taking domain. Younger managers are more willing to invest 5 % of their annual income in a very speculative stock and bet their day's income on the outcome of a sporting event than older managers.

Figure 16: The average item scores within financial risk-taking domain by age group (N=10)

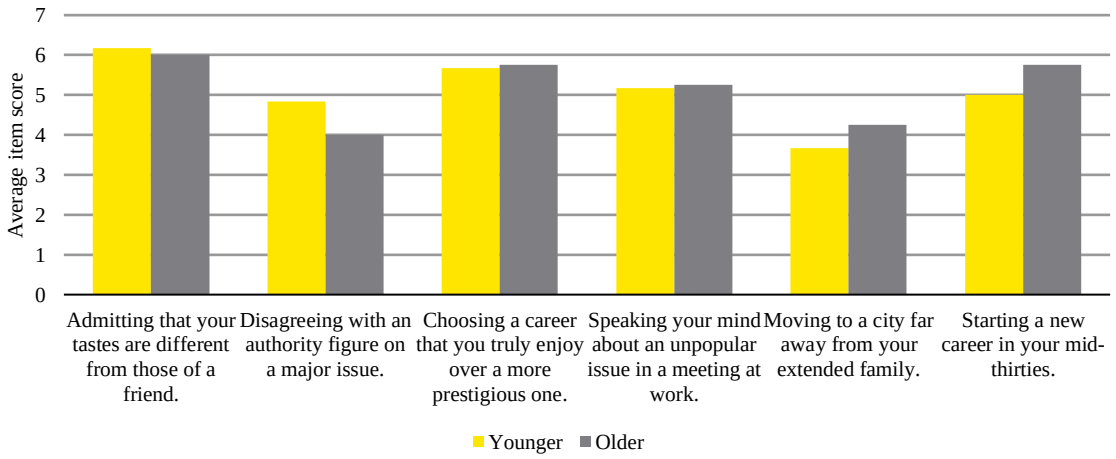


Source: Own work.

The differences in average item scores between younger and older managers within the social risk-taking domain (see Figure 17) have also been evaluated. Both groups are somewhat equally likely to admit that their tastes are different from those of a friend, choose a career that they genuinely enjoy over a more prestigious one and speak their mind about

an unpopular issue in a meeting at work. Older managers are more likely to move to a city far away from their extended family and start a new career in their mid-thirties than younger managers.

Figure 17: The average item scores within social risk-taking domain by age group (N=10)



Source: Own work.

Lastly, the general optimism between the two age groups, based on the perceived life expectancy question was examined. Figure 18 shows that older managers, on average, exhibit higher life expectancy than younger managers.

Figure 18: The average perceived life expectancy by age group (N=10)

Source: Own work.

The results contradict the claims of Nicholson, Soane, Fenton-O'Creevy and William (2005) and, Yao, Sharpe and Wang (2011) that older managers show higher risk aversion than younger managers. Younger managers are perceived to be risk-takers only when faced with recreational decisions, which supports the research of Rolison, Hanoch, Wood and Liu (2014). Furthermore, older managers were found to be more optimistic as they exhibited a higher life expectancy than younger managers. As previous research positively linked

optimism to risk-taking, the linkage could explain the higher risk propensity in older managers (Chen & Lin, 2013). Additionally, optimism was found to be positively related to firm performance (Chen & Lin, 2013; Chen, Lin & Tsai, 2018). As the firm structure is slightly leaning towards younger managers, the firm-specific risk-taking should be at moderate levels. However, in the future, the situation could severely change due to the ageing of the population when the TMT distribution favours managers aged above 39 years. The growing optimism in the company could lead to an even higher corporate risk-taking tendency, demonstrated in higher debt levels and increased volatility of ROE and ROA due to more negative net present value (hereinafter: NPV) projects.

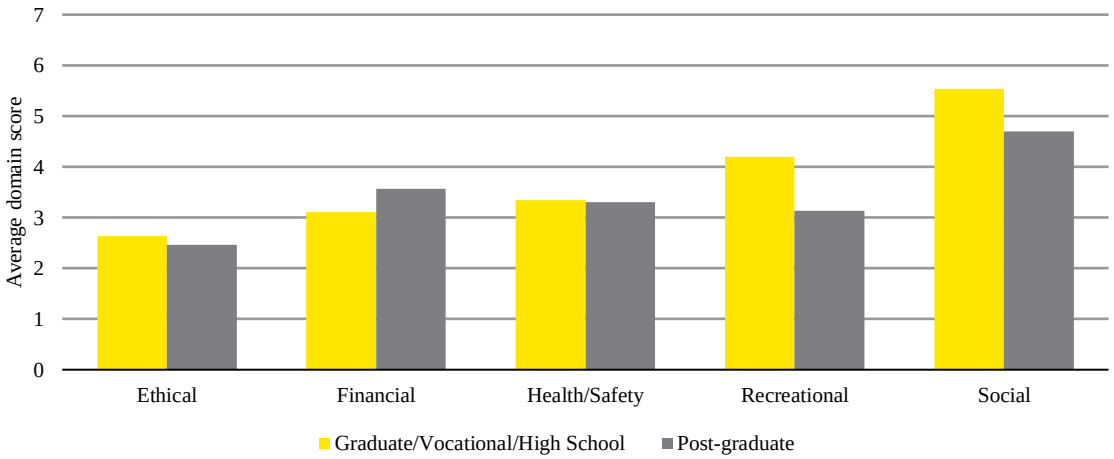
4.6 Personal Income Differences in Risk-Taking

As mentioned at the beginning of the analysis, among the six who were willing to share their income, three personal income categories can be distinguished. However, as two categories contain only one respondent, a comparative analysis between the categories cannot be made. Therefore, one of the research sub-questions goes unanswered.

4.7 Educational Differences in Risk-Taking

In order to analyse educational differences in risk-taking, the respondents were grouped based on whether they had a post-graduate degree, thus obtaining two categories: Graduate/Vocational/High School and post-graduate. Figure 19 shows the average domain risk-taking scores among educational categories. Post-graduates have a higher financial risk tendency than others, whereas managers without a post-graduate degree have a higher recreational and social risk propensity. It was found that at the 5 % level of significance, education has no significant impact on risk-taking scores: $t(6.2) = 1.514$, $p = 0.179$. The same was found for domain risk-taking scores: $t_{ethical}(5.8) = 0.226$, $p_{ethical} = 0.829$, $t_{financial}(8.0) = -0.779$, $p_{financial} = 0.458$, $t_{health/safety}(4.8) = 0.075$, $p_{health/safety} = 0.943$, $t_{social}(4.7) = 1.367$, $p_{social} = 0.234$, $t_{recreational}(5.8) = 1.045$, $p_{recreational} = 0.338$. The results of the independent t-test are presented in Appendix 12. The pooled t-test estimates yielded a similar result, except when assuming a 10 % level of significance, where significant differences in the mean risk-taking scores were found for education (see Appendix 12).

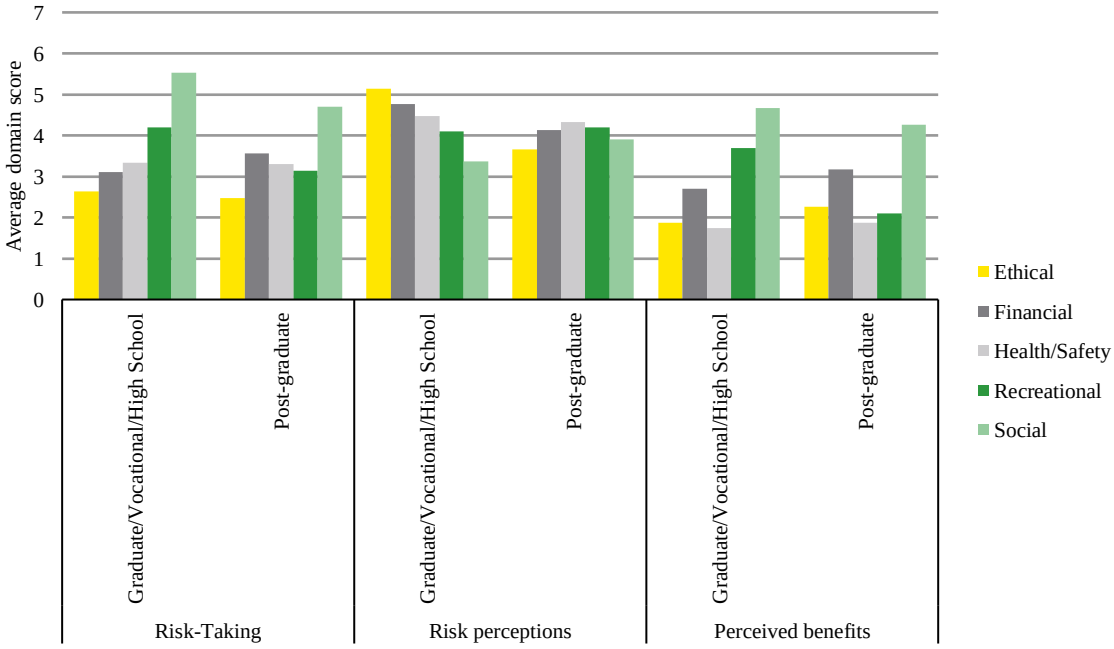
Figure 19: The average domain risk-taking score of the study sample by education (N=10)



Source: Own work.

Using a comparative analysis approach, it was observed that both groups have a high social risk tendency (see Figure 20). Furthermore, both groups perceive social risk behaviours as highly beneficial. Managers who do not have a post-graduate degree perceive unethical behaviours as highly risky.

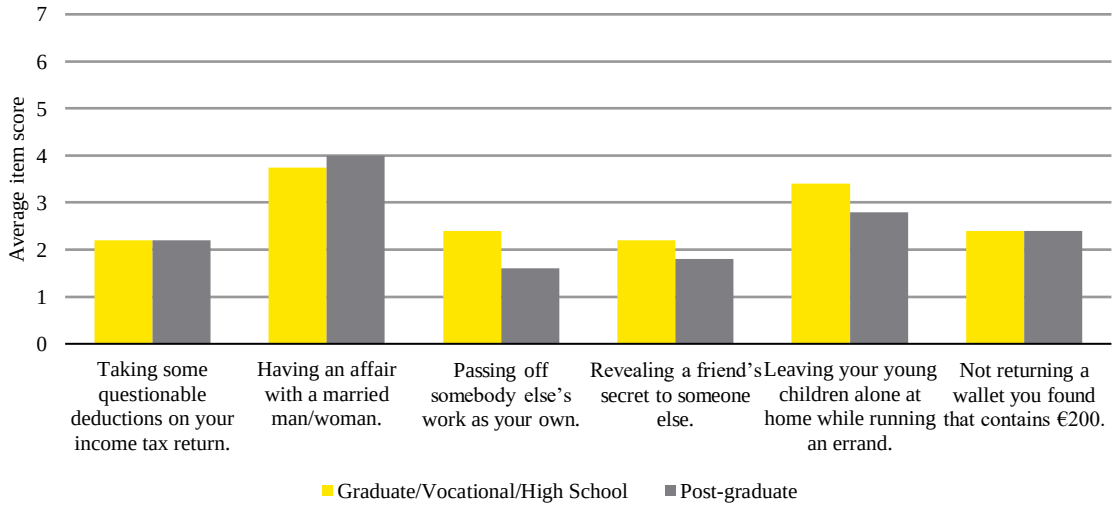
Figure 20: The average scores within domain risk for all three categories of DOSPERT scale by education (N=10)



Source: Own work.

In the following paragraphs, the age differences in average item scores for ethical, financial and social risk-taking domains have been evaluated. The differences in the other two domains are presented in Appendix 8. Figure 21 exhibits differences in average item scores in terms of educational categories within the ethical risk-taking domain. Post-graduate managers are more likely to have an affair with a married man/woman than managers without a post-graduate degree. Both groups are equally likely to take some questionable deductions on their income tax returns and keep a found wallet with €200. Managers who do not have a post-graduate degree are more likely to pass off somebody else's work as their own, reveal a friend's secret to someone else and leave their young children alone at home while running an errand.

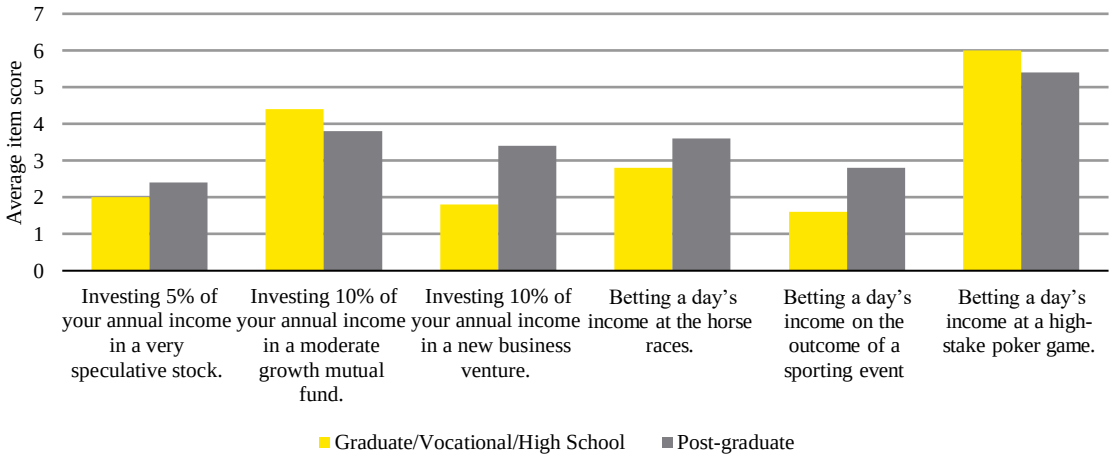
Figure 21: The average item scores within ethical risk-taking domain by education (N=10)



Source: Own work.

Figure 22 shows the differences in average item scores within the financial risk-taking domain in terms of educational categories. Managers who do not have a post-graduate degree are more likely to invest 10 % of their annual income in a moderate growth mutual fund and bet a day's income on a high-stakes poker game.

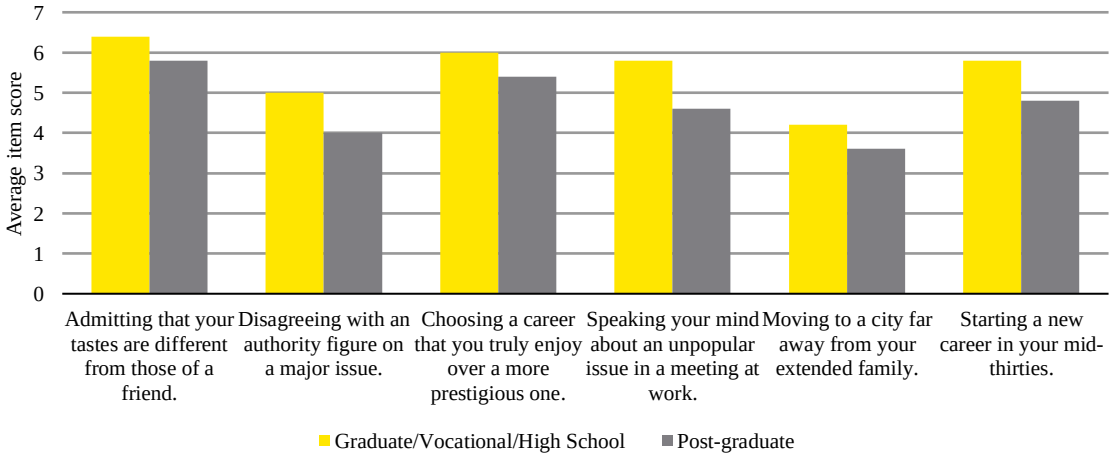
Figure 22: The average item scores within financial risk-taking domain by education (N=10)



Source: Own work.

Figure 23 shows that managers without a post-graduate degree are more likely to engage in risky social behaviours. However, the difference is less noticeable when considering moving to a city far away from their extended family, or when they need to admit that their tastes are different from those of a friend.

Figure 23: The average item scores within social risk-taking domain by education (N=10)



Source: Own work.

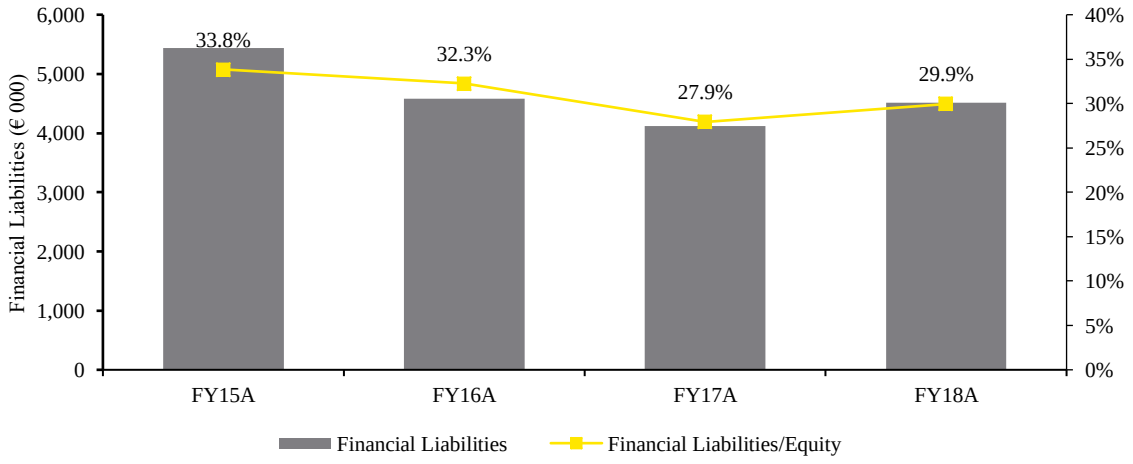
The results indicate that managers who have a post-graduate degree tend to be more risk-averse than those without, which contradicts the research of Beber and Fabbri (2012), Betrand and Schoar (2003), and MacCrimmon and Wehrung (1986). The findings are more in line with Graham and Harvey (2001), and Orens and Reheul (2013), who suggested that a post-graduate specialisation enables managers to be more long-term oriented in decision-

making, which lowers risk-taking tendencies. In terms of the decision domain, managers with a post-graduate degree were found to be more risk-prone when faced with financial decisions, thereby supporting Beber and Fabbri (2012), and Betrand and Schoar (2003), who found that CEOs with an MBA speculate more in the forex market. Further research found a positive correlation between education and firm performance as the more informed one is, the better decisions they make (Darmadi, 2013; Jalbert, Rao & Jalbert, 2002). As the structure of the educational level within the firm is equally distributed, the firm-specific risk-taking might not be impacted by the educational level of managers. However, as firm performance is positively correlated to education, the firm could influence the corporate risk aversion by offering professional development programmes.

4.8 Corporate Risk-Taking

As discussed in the methodology section, corporate risk-taking is evaluated from the corporate behaviour (capital structure and acquisition propensity) and profitability (standard deviation of ROA and ROE) perspectives. As defined by Lee, Lee and Lee (2008, p. 299), the capital structure above 50% indicates high corporate risk-taking. The financial liabilities to equity ratio was the highest in FY15A and lowest in FY17A (see Figure 24), but on average, around 30.4%. As the average is approximately 19.2 percentage points lower than the indicated threshold, the corporate risk-taking can be evaluated as semi-strong.

Figure 24: Financial Debt and Financial Debt/Equity movement from FY15A to FY18A

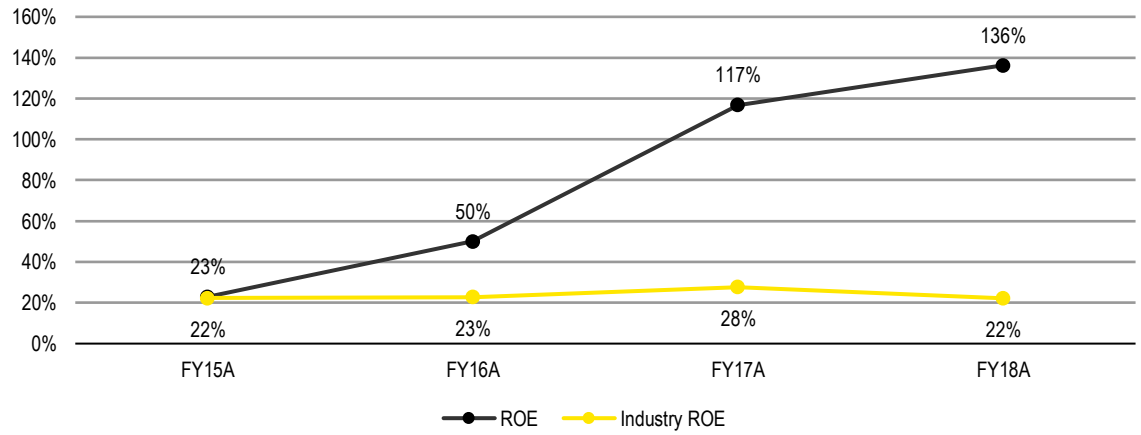


Source: Bisnode (2015b, 2016b, 2017b, 2018b).

The common threshold for the volatility of ROA and ROE is the industry average, as defined by Miller and Bromiley (1990) and Whalen (2000). Figure 25 shows the movement of firms' ROE against the movement of the industry ROE in the observed period. Firms' ROE can be seen increasing throughout the observed period, mainly due to increases in net profit. The significant jump from FY16A to FY17A is due to increased printing production and collection and processing of waste materials (a secondary business activity of the company).

Additionally, in FY17A and FY18A, the company disinvested in a printing line (Bisnode, 2015a, 2016a, 2017a, 2018a, 2019, 2020). When comparing to the industry, the firm's ROE is above the industry average (23.7 %) in all years. As the volatility of the ROE is above the industry average, the ratio indicates a high corporate risk-taking level. The movement of the firm's ROA as compared to the industry ROA can be seen in Appendix 9. The findings are similar to the ROE, thus indicating high corporate risk-taking.

Figure 25: The firms' ROE movement compared to the movement of industry ROE from FY15A to FY18A (in %)



Source: Own work based on Bisnode (2015b, 2016b, 2017b, 2018b, 2015c, 2016c, 2017c, 2018c).

In FY19A, the company had two acquisitions, one as part of vertical integration and another in the form of entering a new market. Both provided high synergies as the vertical integration lowered the costs, while the new market helped the company become more digitised. Furthermore, the vertically integrated company is a mature company with low levels of financial liabilities, whereas the other is a new company in the launch phase of the business cycle. Additionally, since FY15A, they have had five disinvestments (Bisnode, 2015a, 2016a, 2017a, 2018a, 2019, 2020), thus indicating low corporate risk-taking. However, the disinvestments can be seen as failed past investments, due to accepting negative NPV projects as a consequence of higher willingness to take risks on a corporate level.

The semi-high debt could be explained by the fact that the company operates in the advertising industry, while the higher volatilities suggest a high number of investments as well as disinvestments that brought positive synergies to the company by taking on risk. Together, they indicate a strong corporate risk propensity. However, as the acquisition propensity is low, the corporate risk propensity should be evaluated as semi-strong. In conclusion, corporate risk-taking reflects the semi-strong managers' risk propensity, which confirms the studies of Zhou and Wang (2014) and Hambrick and Mason (1984).

4.9 Key findings

The research identified that managers in the company are high social risk-takers and low ethical risk-takers. As the company operates in the media industry (offering advertisement options on media platforms such as radio and magazines), it is natural for them to be very outgoing and willing to take risks since the company profit is tied to commissions. Furthermore, they need to uphold personal connections to their clients to have them come back with more orders. Additionally, while the main activity is offering advertisement, the company, has in its portfolio radio and magazines for which they need to create content. Thus, a lot of groundworkers are reporters, whose profession requires highly ethical behaviour. However, it is surprising that some managers would engage in unethical behaviour, such as having an affair with a married man/woman or not returning a wallet containing €200. These surprising findings could be due to cultural influence. Stereotypically, Slovenians are a jealous, selfish, and greedy nation. As such, free money, whether it belongs to them or not, would be eagerly accepted.

In terms of personality traits, managers are found to be more conscientious, extraverted, and open to the experience. This finding is expected due to the nature of the industry as well as the corporate culture. As mentioned, managers need to be outgoing and open to maintain personal connections with clients. Furthermore, the company culture is very relaxed and inviting, where employees are predominantly young males. When visiting, you can visually see the "bromance" between the employees as well as their free-going nature. When evaluating the personality traits and risk-taking, a contradictory result was found. The findings show a positive correlation between conscientiousness and recreational risk-taking. I believe that the positive relationship is due to the positive association between perceived benefits and recreational risk-taking, which from personal experience coincides with the behaviour of Slovenians who are goal-oriented. They often seek relaxation in extreme sports, which offers the spontaneity that they do not have in their every-day lifestyle.

The findings on gender difference are in line with Weber, Blais and Betz's (2002) research as well as Lam, McGuiness and Vietto's (2013). Male managers are more prone to take risks as female managers, except when viewing the financial risk-taking domain. The difference could be due to cultural influence as Balkan women are known to be prone to spend money. The results on age differences contradict the claims of Nicholson, Soane, Fenton-O'Creevy and William (2005) and, Yao, Sharpe and Wang (2011) that older managers show higher risk aversion than younger managers. Younger managers are perceived to be risk-takers only when faced with recreational decisions, which supports the research of Rolison, Hanoch, Wood and Liu (2014).

Furthermore, older managers are found to be more optimistic as they exhibited a higher life expectancy than younger managers. As previous research positively linked optimism to risk-taking, the linkage could explain the higher risk propensity in older managers (Chen & Lin, 2013). The cultural background of managers could also explain the contradictory findings.

Often when speaking with young Slovenians about finances, they express the need to save for the future in which they will buy a house or a car. As such, they are very risk-averse when it comes to money. Furthermore, Slovenians are thought from a young age to be stingy and build a life gradually (e.g. on average, it takes four to five years for a Slovenian to build a house).

Lastly, the research identified that managers who have a post-graduate degree tend to be more risk-averse than those without, which contradicts the analysis of Beber and Fabbri (2012), Betrand and Schoar (2003), and MacCrimmon and Wehrung (1986). The findings are more in line with Graham and Harvey (2001), and Orens and Reheul (2013). They suggested that a post-graduate specialisation enables managers to be more long-term oriented in decision-making, which lowers risk-taking tendencies. Additionally, in Slovenia younger generations tend to become more mature after graduating and receiving their first employment. The mindset changes where people become more aware of the expenses that were previously paid by their parents. Thus, they start to save more and become more risk-averse.

4.10 Limitations and suggestions for future research

The research is suffering from a sampling bias as the company was not selected at random. Furthermore, the accessibility of managers was limited due to their hectic lifestyle, which is reflected in the small sample size. In turn, the small sample size limited the generalizability of the research, the reliability of p-values, and made it quite challenging to investigate the differences in financial position. Due to COVID-19 pandemic and the limited accessibility of managers, it became substantially challenging to proceed with the mixed-method approach as initially designed. Thus, the effect of managers risk propensity on investment decisions could only be evaluated intuitively based on the extensive research of the theory on managers risk propensity and corporate risk propensity. Additionally, the research design was limited to a single case study, as such, the thesis could not provide any insights to the differences across industries. Afterall, a single case study in one country does not unravel the effects of national culture, organizational culture, and the particular industry of the business.

A suggestion for future research would be to include an interview-based approach for better qualitative data when evaluating the effect of managers risk propensity on investment decisions in a specific company. The method could consist of choice-framed questions that would provide additional insights into how managers make investment decisions. Additionally, the researcher could investigate the managers' risk propensity in the industry or Slovenia as a whole. A larger study sample including different industries or company types would allow for the unravelling of the effects of national culture, organizational culture, and the particular industry of the business. Furthermore, it would be possible to include a factor model in which firm performance would be the dependent variable and

managers risk propensity one of the independent variables. All in all, the thesis provides the groundwork for further research on managers' risk propensity in Slovenia.

CONCLUSION

Managers risk propensity plays a central role in corporate decision making (Hilary & Hui, 2009; Malmendier, Tate & Yan, 2011). Thus, the research tried to provide insights regarding managerial risk propensity in a Slovenian company, operating within the advertising industry (mainly offering radio and magazine advertising), and its potential influence on investment decisions inside the company. Upon reviewing the literature, two research questions were designed:

- How does risk propensity differ among managers in the selected Slovenian company, based on gender, age, financial position, education and personality?
- How do the identified differences influence the investment decision process in the selected Slovenian company?

Initially, a mixed-method approach (questionnaire and interview) was designed. The mixed-method was used by Kolnhofer-Derecskei and Nagy (2016), Wilmes (2017), and Zhang (2016) when evaluating managers risk propensities. The results yielded a better understanding of managers risk propensities and their decision-making process. However, due to the COVID-19 pandemic reaching its peak in March, the managers have become increasingly hard to reach. During the pandemic, the company had to redesign itself by offering more digitalised products and perform some cost-cutting actions (e.g. put on hold non-essential personnel). Thus, the research design changed to incorporate only the quantitative method (questionnaire). As such, the research generalisability is limited due to the small sample size.

Managers risk propensity was measured by using a well-established 30-item domain risk-taking scale developed by Blais and Weber (2006). The DOSPERT scale measured the risk propensity across five domains: social, recreational, financial, ethical and health/safety. Previous research by Weber, Blais and Betz (2002) found significant gender differences in risk propensity across all domains, except for the social domain. Males were more likely to engage in risky behaviour than females. Similar findings were found by Ertac and Gurdal (2012), Harris, Jenkins and Glaser (2006), and Johnson, Wilke and Weber (2004). Gender differences were also linked to the level of corporate risk-taking by Jianakoplos and Bernasek (1998), and Lam, McGuiness and Vietto (2013). An organisational structure leaning more toward women indicated a lower level of corporate risk-taking than an organisational structure leaning more toward males. While this research did not find any significant gender differences in managers risk propensities, it can be concluded based on the evaluation of each domain score that males are more risk-prone than females. Additionally, the average domain scores differ across all domains except social, where males

and females had, on average, similar item scores. Thus, confirming the findings of previous research.

Managers risk propensities were also evaluated in terms of age and educational differences. Previous research by Nicholson, Soane, Fenton-O'Creevy and William (2005), and Yao, Sharpe and Wang (2011) found that older managers have a higher risk aversion than younger managers. This research, however, found contradicting results based on a visual inspection of the average domain scores. Younger managers are perceived to be risk-takers only when faced with recreational decisions, which supports the research of Rolison, Hanoch, Wood and Liu (2014). The higher risk propensity in older managers could be explained by their high optimism, which was found to be positively linked to risk-taking and firm performance (Chen & Lin, 2013; Chen, Lin & Tsai, 2018). The research of Beber and Fabbri (2012), Betrand and Schoar (2003), and MacCrimmon and Wehrung (1986) found that managers who have a post-graduate degree tend to be less risk-averse than those without it. However, this research found contradicting results. The findings are more in line with Graham and Harvey (2001), and Orens and Reheul (2013). They suggested that a post-graduate specialisation enables managers to be more long-term oriented in decision-making, which lowers risk-taking tendencies. Because the sample size is small, the research could not investigate the differences in managers risk propensities based on financial positions. Furthermore, due to the small sample size, it was not easy to find a significant relationship from the data. Thus, further research could investigate the differences among companies within the same industry or from different industries to discover the general manager's risk propensity in Slovenian industries and make the research more generalisable to improve its validity.

Personality traits extraversion, agreeableness, conscientiousness, neuroticism, and openness were measured using the 44-item Big Five Inventory scale. Previous research linked personality traits to risk propensity. The research of Nicholson, Soane, Fenton-O'Creevy and William (2005) found a negative link to risk tolerance for conscientiousness and agreeableness, whereas extraversion and openness were positively linked to risk tolerance. Furthermore, they found that low conscientiousness is associated with higher risk propensity in all five decision domains. However, this research found a negative relationship to risk-taking only in ethical, financial, and health/safety domains, whereas a positive relationship was found for recreational and social domains. Although the results might suggest that the relationship between agreeableness and risk-taking is positive, a more plausible explanation is that lower agreeableness supplies the motivational force for risk-taking (Nicholson, Soane, Fenton-O'Creevy & William, 2005).

A review of the literature revealed that age, education, agreeableness, and contentiousness are positively related to corporate risk-taking (Desai, 2008; Elsaid & Ursel, 2012; Farag & Mallin, 2018). Additionally, it was discovered that a board composition of only male managers leads to higher corporate risk-taking tendencies compared to a mixed-gender board composition (Lam, McGuiness & Vietto, 2013). Thus, it can be inferred that an organisation

with more male managers will have a higher level of corporate risk-taking, which was measured by looking at four factors: the volatility of ROA, the volatility of ROE, acquisition propensity, and capital structure. Such measures were used by Benmelech and Frydman (2015), Bromiley, Miller and Rau (2001), and Coles, Naveen and Naveen (2006). As defined by Lee, Lee and Lee (2008, p. 299), the capital structure above 50% indicates high corporate risk-taking. The common threshold for the volatility of ROA and ROE is the industry average – when above the average, the company has a level of high corporate risk-taking (Miller & Bromiley, 1990; Whalen, 2000).

The average company debt to equity ratio between FY15A and FY18A was around 30.4%, which is 19.2 percentage points below the indicated threshold. Furthermore, the volatility of ROE and ROA is above the indicated industry average from FY15A to FY18A. In FY19A, the company had two acquisitions, one as part of vertical integration and another in the form of entering a new market. Both provided high synergies. Additionally, since FY15A, they have had five disinvestments. The corporate profitability (volatility of ROE and ROA) indicates high corporate risk-taking, whereas corporate behaviour (capital structure and acquisition propensity) indicate a moderate risk-taking behaviour. Intuitively, we can confirm that corporate risk-taking behaviour reflects the level of managers' risk propensity, which on a firm-level indicated that managers are strong risk-takers. However, for a more direct connection and understanding of how managers risk propensities influence investment decisions, interview-based research should be conducted. Concurrently, the research laid down the groundwork for further studies in the field of managers' risk propensities in Slovenia.

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APPENDIXES

Appendix 1: Povzetek (Summary in the Slovene language)

Ljudje se dnevno soočamo s sprejemanjem odločitev (npr. kaj bomo danes jedli, kam bomo šli na izlet). Odločanje ima osrednjo vlogo v človeškem vedenju. Nekatere odločitve so rutinske (npr. ali pijete sladkano kavo ali ne), druge so strateške (npr. na katero fakulteto se boste prijavili, kdo bo vaš prvi delodajalec). Strateške odločitve pogosto temeljijo na stopnji nagnjenosti k tveganju oziroma odpora do tveganja (Ernst in drugi, 2002).

Nagnjenost k tveganju ali strpnost je opredeljena kot stopnja pripravljenosti posameznikov, da pri doseganju zaželenega cilja, katerega uresničitev je negotova, tvegajo. Nasprotno pa je odpor do tveganja posameznikovo obotavljanje pri soočanju z dvema alternativama: ena, ki ima negotov izid in druga, ki ima gotov izid (Fisher & Yao, 2017; Xiao, 2008). Na primer, nižja nagnjenost k tveganju ali odpor do visokega tveganja lahko vpliva na študentovo izbiro prve zaposlitve. Namreč, študent bo morda prenehal z iskanjem zaposlitve, ko prejme svojo prvo ponudbo, čeprav mu ali ji delovno mesto ne odgovarja oziroma ne predstavlja želenega delovnega mesta.

Odpor in strpnost do tveganja imata velik pomen tudi za korporacijo in njeno uspešnost. Namreč, stopnja naklonjenosti k tveganju oziroma strpnost do tveganja vpliva na managerjevo odločanje. Strpnost do visokega tveganja ali odpornost do majhnega tveganja lahko povzroči prekomerno izpostavljenost organizacije k tveganju, ki škoduje in vodi v plačilno nesposobnost. Po drugi strani pa strpnost do nizkega tveganja ali odpor do visokega tveganja lahko ovira rast in spodkopava vrednost delničarjev (Shemesh, 2017). Organizacijska strpnost do tveganja se lahko ugotovi na podlagi različnih vodstvenih vedenj oziroma odločitev, kot so dolžniška obremenitev, izdatki za raziskave in razvoj, diverzifikacija podjetij, obratna sredstva (Ferris, Javakhadze in Rajkovic, 2017); združitve, prevzemi, dolgoročni finančni dolg (Lee & Moon, 2016); dodelitev pokojninskih sredstev (Guan & Tang, 2018); inovativnost, dolgoročne naložbe in življenjski cikel podjetja (Plöckinger, Aschauer, Hiebl & Rohatschek, 2019). Po drugi strani pa nekatere raziskave uporabljajo tudi nestanovitnost pri mesečni donosnosti delnic, donosnosti sredstev in donosnosti kapitala (Boubakri, Cosset & Saffar, 2013; Ferris, Javakhadze & Rajkovic, 2017; Guan & Tang, 2018).

Te ugotovitve so skladne s teorijo *Upper Echelons*, ki pravi, da organizacijska uspešnost odraža značilnosti strateških voditeljev (Hambrick & Mason, 1984). Te značilnosti so razvrščene v dve skupini: opazne (npr. spol, starost, zaposlitev, izobraževalno in funkcionalno ozadje, družbenoekonomske korenine) in psihološke (vrednote, zaznavanje in osebnostne lastnosti) (Hambrick & Mason, 1984). Ugotovljeno je bilo, da opazne in psihološke značilnosti vplivajo na stopnjo naklonjenosti k tveganju. Najpogostejša opažena značilnost, ki so jo preučevali, je spol. Nicholson, Soane, Fenton-O'Creevy in William (2005) so ugotovili, da je tveganje večinoma pojav mladih moških na področjih rekreacije, varnosti in zdravja. Glede finančnega tveganja so ženske veliko bolj konservativne kot moški in se zato manj verjetno ukvarjajo s premoženjskim upravljanjem (Faff, Mulino & Chai,

2008; Fisher & Yao, 2017; Grable, McGrill & Britt, 2009; Neelakantan, 2010; Zalata, Ntim, Aboud & Gyapong, 2019). Druga najbolj raziskana značilnost, ki jo je mogoče opaziti, je starost, ki je obratno povezana z nagnjenostjo k tveganju (Grable, McGrill & Britt, 2009; Nicholson, Soane, Fenton-O'Creevy & William, 2005; Wang & Hanna, 1997; Yao & Hanna, 2005; Yao, Sharpe & Wang, 2011). Magistrsko delo se osredotoča tudi na vpliv osebnega dohodka in izobrazbe na stopnjo nagnjenosti k tveganju. Ugotovljena je bila tudi pozitivna korelacija med dohodkom in stopnjo strpnosti do tveganja, medtem ko ugotovitve o vplivih izobraževanja kažejo tako pozitivne kot negativne korelacije s stopnjo strpnosti do tveganja (Ardehali, Paradi & Asmild, 2005; Coles, Naveen & Naveen, 2006; Courbage , Montoliu-Montes & Rey, 2018; Cristian, 2012; Deaves, Veit, Bhandari & Cheney, 2007; Grable, 1997; Grable & Joo, 2004). Kar se tiče psiholoških značilnosti, magistrsko delo preučuje samo osebnostne lastnosti, kot sta ekstravertiranost in odprtost, za katere je bilo ugotovljeno, da so pozitivno povezane s strpnostjo do tveganja, medtem ko všečnost in vestnost pa sta negativno povezani s strpnostjo do tveganja (Harlow & Brown, 1990; Mishra in Lalumière, 2011 ; Nicholson, Soane, Fenton-O'Creevy & William, 2005; Sadiq & Amna, 2019; Wang, Xu, Zhang & Chen, 2016).

Namen magistrskega dela je zagotoviti vpogled v managerjevo nagnjenost k tveganju v Sloveniji ob preučevanju dotičnega slovenskega podjetja. Poleg tega bi moralo razumevanje managerjeve nagnjenosti k tveganju v določenem podjetju razkriti intuicije glede možnega vpliva nagnjenosti tveganja na naložbene odločitve podjetja. Hkrati se pričakuje, da bo magistrska naloga spodbudila raziskovalce in študente, da nadaljujejo raziskavo o managerjevi nagnjenosti k tveganju v Sloveniji s osredotočanjem na specifično industrijo ali celotno Slovenijo. Na podlagi pregleda literature sta bila zasnovana naslednja raziskovalna vprašanja:

- Kako se razlikuje stopnja nagnjenosti k tveganju med managerji v izbranem slovenskem podjetju glede na spol, starost, finančni položaj, izobrazbo in osebnost?
- Kako bi lahko ugotovljene razlike vplivale na postopek odločanja o naložbah v izbranem slovenskem podjetju?

Na podlagi kvantitativne in kvalitativne analize managerjeve nagnjenosti k tveganju in organizacijske nagnjenosti k tveganju je mogoče sklepati, kljub statistično neznačilnih razlikah med skupinami, da spol, starost, izobrazba in osebnost vplivajo na naložbene odločitve. Poleg tega je magistrsko delo zagotovilo edinstven vpogled v managerjevo nagnjenost k tveganju znotraj oglaševalskega podjetja. Rezultati kažejo, da starejši ekstravertirani managerji moškega spola brez podiplomske izobrazbe, ki izkazujejo visoko odprtost in nizko nevrotičnost, bodo verjetno večkrat sprejemali tvegane naložbene odločitve za podjetje.

Obseg korporativne nagnjenosti k tveganju bi bilo mogoče omiliti z dodatnimi izobraževalnimi seminarji za njihovo vodstvo s katerimi bi tudi spodbudili nadaljnje

izobraževanje. Drugo priporočilo bi bila reorganizacija, ki bi zmanjšala spolno neenakost pri vodstvu. Poleg tega mora podjetje upoštevati neizogibno staranje prebivalstva, kar bi povečalo število starejših managerjev nad 40 let. Njihov naraščajoči optimizem bi lahko povzročil višjo organizacijsko nagnjenost k tveganju v primerjavi s sedanjo situacijo, kar bi se izrazilo v višji stopnji dolga in večjemu nihanju ROE in ROA zaradi sprejemanja več negativnih NPV projektov.

Appendix 2: Example of the Company-Wide Email Sent from the CEO Email Address

Pozdravljeni,

sem Karmen Krvina, študentka Ekonomske fakultete, in pripravljam magistrsko nalogo z naslovom *Vpliv managerjeve nagnjenosti k tveganju na investicijske odločitve* (ang. *Effect of managers' risk propensity on investment decisions)*. Namen raziskave je ugotoviti, kako managerjeva nagnjenost k tveganju vpliva na investicijske odločitve v podjetju in njegovo dolgoročno rast. Eden izmed preučevanih vplivov bo tudi osebnost managerjev, ki ima bistven vpliv na nagnjenost k tveganju. **Vaše sodelovanje je za raziskavo ključno**, saj le z vašimi odgovori lahko dobimo vpogled v managerjevo nagnjenosti k tveganju in njegovo osebnost.

Za izpolnjevanje ankete boste potrebovali ***približno 15 minut*** vašega časa. Anketa je ***popolnoma anonimna.*** Respondent bo pričel anketo z odgovarjanjem na vprašanja, ki bodo pomagala oceniti njegovo nagnjenost k tveganju. Anketni vprašalnik je pripravljen ***na podlagi standardiziranega vprašalnika DOSPERT*** (*Blais & Weber, 2006; Weber, Blais & Betz, 2002).* Sledili mu bodo vprašanja za določanje osebnosti, ki so pripravljena ***na podlagi standardiziranega vprašalnika Big Five Inventory*** *(Benet-Martinez & John, 1998; John, Donahue & Kentle, 1991; John, Naumann & Soto, 2008).* Oba vprašalnika sta bila za potrebe te magistrske naloge prevedena v slovenščino. Na koncu bo bil respondent naprošen k izpolnitvi kratkih demografskih vprašanj.

Za sodelovanje pri anketi in zbiranje posredovanih podatkov se odločite s klikom na gumb Naslednja stran. Zbrani podatki bodo ***obravnavani strogo zaupno*** in ***analizirani na splošno*** (in nikakor ne na ravni odgovorov posameznika). ***V nobenem primeru ne bodo odgovori posameznikov bili identificirani.*** V namen zaščite posameznika se piškotki zbirajo le do zaključka ankete (najnižja možna stopnja pobiranja piškotkov na portalu 1ka). Posameznik, ki zapre anketo oziroma brskalnik bo anketni vprašalnik moral izpolniti še enkrat, saj se odgovori ne bodo zabeležili. Kljub temu pa se morajo respondenti zavedati, da anketa ne poteka preko "varnega" https strežnika, ki se običajno uporablja za transakcije s kreditnimi karticami, zato obstaja majhna možnost, da bi odzive lahko pregledale nepooblaščene tretje osebe (npr. računalniški hekerji).

V kolikor se pojavijo pri izpolnjevanju ankete dodatna vprašanja, pritožbe ali pomisleki, lahko le te napišete na slednji e-poštni naslov: krvina.karmen@gmail.com.

Za vaše sodelovanje se vam prijazno zahvaljujem.

Karmen Krvina

Appendix 3: Questionnaire in the Slovene Language

Pozdravljeni,

sem Karmen Krvina, študentka Ekonomske fakultete, in pripravljam magistrsko nalogo z naslovom *Vpliv managerjeve nagnjenosti k tveganju na investicijske odločitve* (ang. *Effect of managers' risk propensity on investment decisions)*. Namen raziskave je ugotoviti, kako managerjeva nagnjenost k tveganju vpliva na investicijske odločitve v podjetju in njegovo dolgoročno rast. Eden izmed preučevanih vplivov bo tudi osebnost managerjev, ki ima bistven vpliv na nagnjenost k tveganju. **Vaše sodelovanje je za raziskavo ključno**, saj le z vašimi odgovori lahko dobimo vpogled v managerjevo nagnjenosti k tveganju in njegovo osebnost.

Za izpolnjevanje ankete boste potrebovali ***približno 15 minut*** vašega časa. Anketa je ***popolnoma anonimna.*** Respondent bo pričel anketo z odgovarjanjem na vprašanja, ki bodo pomagala oceniti njegovo nagnjenost k tveganju. Anketni vprašalnik je pripravljen ***na podlagi standardiziranega vprašalnika DOSPERT*** (*Blais & Weber, 2006; Weber, Blais & Betz, 2002).* Sledili mu bodo vprašanja za določanje osebnosti, ki so pripravljena ***na podlagi standardiziranega vprašalnika Big Five Inventory*** *(Benet-Martinez & John, 1998; John, Donahue & Kentle, 1991; John, Naumann & Soto, 2008).* Oba vprašalnika sta bila za potrebe te magistrske naloge prevedena v slovenščino. Na koncu bo bil respondent naprošen k izpolnitvi kratkih demografskih vprašanj.

Za sodelovanje pri anketi in zbiranje posredovanih podatkov se odločite s klikom na gumb Naslednja stran. Zbrani podatki bodo ***obravnavani strogo zaupno*** in ***analizirani na splošno*** (in nikakor ne na ravni odgovorov posameznika). ***V nobenem primeru ne bodo odgovori posameznikov bili identificirani***. V namen zaščite posameznika se piškotki zbirajo le do zaključka ankete (najnižja možna stopnja pobiranja piškotkov na portalu 1ka). Posameznik, ki zapre anketo oziroma brskalnik bo anketni vprašalnik moral izpolniti še enkrat, saj se odgovori ne bodo zabeležili. Kljub temu pa se morajo respondenti zavedati, da anketa ne poteka preko "varnega" https strežnika, ki se običajno uporablja za transakcije s kreditnimi karticami, zato obstaja majhna možnost, da bi odzive lahko pregledale nepooblaščene tretje osebe (npr. računalniški hekerji).

V kolikor se pojavijo pri izpolnjevanju ankete dodatna vprašanja, pritožbe ali pomisleki, lahko le te napišete na slednji e-poštni naslov: krvina.karmen@gmail.com.

Za vaše sodelovanje se vam prijazno zahvaljujem.

Karmen Krvina

BLOK (1) (Nagjenost k tveganju)

Q1 - Za vsako od naslednjih trditev **navedite verjetnost**, da bi se vključili v opisano dejavnost ali vedenje, če bi se znašli v tej situaciji. Navedite oceno od zelo malo verjetno do zelo verjetno z uporabo naslednje lestvice:

	Ni verjetno	Malce verjetno	Nekoliko verjetno	Niti niti	Verjetno	Zelo verjetno	Ekstremno verjetno	Ne želim odgovoriti
Priznati, da so vaši okusi drugačni od vašega prijatelja.	○	○	○	○	○	○	○	○
Kampiranje v divjini.	○	○	○	○	○	○	○	○
Staviti dnevni zaslužek na konjskih dirkah.	○	○	○	○	○	○	○	○
Vložiti 10% vašega letnega dohodka v sklad z zmerno rastjo.	○	○	○	○	○	○	○	○
Se močno napiti na družabnem srečanju.	○	○	○	○	○	○	○	○
Narediti vprašljive odbitke od plače.	○	○	○	○	○	○	○	○
Se nestrinjati z avtoriteto pri pomembnem vprašanju.	○	○	○	○	○	○	○	○
Staviti dnevni zaslužek pri igri pokra z velikimi vložki.	○	○	○	○	○	○	○	○
Imeti razmerje s poročenim moškim/poročeno žensko.	○	○	○	○	○	○	○	○
Oddajanje dela nekoga drugega kot vaše.	○	○	○	○	○	○	○	○
Spust po smučišču, ki presega vaše sposobnosti.	○	○	○	○	○	○	○	○
Vložiti 5% vašega letnega dohodka v zelo špekulativne vrednostne papirje.	○	○	○	○	○	○	○	○
Raftanje v nevarnih vodah.	○	○	○	○	○	○	○	○
Staviti dnevni vložek na izid	○	○	○	○	○	○	○	○

	Ni verjetno	Malce verjetno	Nekoliko verjetno	Niti	Verjetno	Zelo verjetno	Ekstremno verjetno	Ne želim odgovoriti
tekme.								
Imeti nezaščiten spolni odnos.	○	○	○	○	○	○	○	○
Razkrivanje prijateljeve skrivnosti nekomu drugemu.	○	○	○	○	○	○	○	○
Voziti avto brez pripetega varnostnega pasu.	○	○	○	○	○	○	○	○
Vložiti 10% vašega letnega dohodka v nov poslovni podvig.	○	○	○	○	○	○	○	○
Obiskovanje tečaja za padalce.	○	○	○	○	○	○	○	○
Voziti motor brez čelade.	○	○	○	○	○	○	○	○
Izbira kariere, v kateri boste resnično uživali, namesto varne kariere.	○	○	○	○	○	○	○	○
Govoriti o nepriljubljeni problematiki na sestanku v službi.	○	○	○	○	○	○	○	○
Sončiti se brez sončne kreme.	○	○	○	○	○	○	○	○
Pilotirati majhno letalo.	○	○	○	○	○	○	○	○
Bungee skok iz visokega mostu.	○	○	○	○	○	○	○	○
Hoditi domov sam ponoči v nevarnem območju mesta.	○	○	○	○	○	○	○	○
Selitev v mesto, oddaljeno od razširjene družine.	○	○	○	○	○	○	○	○
Začeti novo kariero v sredi svojih tridesetih.	○	○	○	○	○	○	○	○
Pustiti svoje majhne otroke doma, medtem ko opravljate opravilo.	○	○	○	○	○	○	○	○
Ne vrnete	○	○	○	○	○	○	○	○

	Ni verjetno	Malce verjetno	Nekoliko verjetno	Niti niti	Verjetno	Zelo verjetno	Ekstremno verjetno	Ne želim odgovoriti
denarnice, katero ste našli in vsebuje 200 eurov.								

BLOK (2) (Zaznavanje tveganja)

Q2 - Ljudje pogosto vidijo neko tveganje v situacijah, ki vsebujejo negotovost. Vendar pa je tveganje zelo oseben in intuitiven pojem, zato nas zanima **vaša ocena**, kako tvegana je vsaka situacija ali vedenje.Za vsako od naslednjih trditev navedite, kako tvegano dojemate vsako situacijo. Navedite oceno od sploh ne tveganega do ekstremnega tveganja z uporabo naslednje lestvice:

	Ni tvegano	Malce tvegano	Nekolikotvegano	Niti niti	Tvegano	Zelotvegano	Ekstremno tvegano	Ne želim odgovoriti
Priznati, da so vaši okusi drugačni od vašega prijatelja.	○	○	○	○	○	○	○	○
Kampiranje v divjini.	○	○	○	○	○	○	○	○
Staviti dnevni zaslužek na konjskih dirkah.	○	○	○	○	○	○	○	○
Vložiti 10% vašega letnega dohodka v sklad z zmerno rastjo.	○	○	○	○	○	○	○	○
Se močno napiti na družabnem srečanju.	○	○	○	○	○	○	○	○
Narediti vprašljive odbitke od plače.	○	○	○	○	○	○	○	○
Se nestrinjati z avtoriteto pri pomembnem vprašanju.	○	○	○	○	○	○	○	○
Staviti dnevni zaslužek pri igri pokra z velikimi vložki.	○	○	○	○	○	○	○	○
Imeti razmerje s poročenim moškim/poroče	○	○	○	○	○	○	○	○

	Ni tvegano	Malce tvegano	Nekolikotvegano	Niti niti	Tvegano	Zelotvegano	Ekstremno tvegano	Ne želim odgovoriti
no žensko.								
Oddajanje dela nekoga drugega kot vaše.	○	○	○	○	○	○	○	○
Spust po smučišču, ki presega vaše sposobnosti.	○	○	○	○	○	○	○	○
Vložiti 5% vašega letnega dohodka v zelo špekulativne vrednostne papirje.	○	○	○	○	○	○	○	○
Raftanje v nevarnih vodah.	○	○	○	○	○	○	○	○
Staviti dnevni vložek na izid tekme.	○	○	○	○	○	○	○	○
Imeti nezaščiten spolni odnos.	○	○	○	○	○	○	○	○
Razkrivanje prijateljeve skrivnosti nekomu drugemu.	○	○	○	○	○	○	○	○
Voziti avto brez pripetega varnostnega pasu.	○	○	○	○	○	○	○	○
Vložiti 10% vašega letnega dohodka v nov poslovni podvig.	○	○	○	○	○	○	○	○
Obiskovanje tečaja za padalce.	○	○	○	○	○	○	○	○
Voziti motor brez čelade.	○	○	○	○	○	○	○	○
Izbira kariere, v kateri boste resnično uživali, namesto varne kariere.	○	○	○	○	○	○	○	○

	Ni tvegano	Malce tvegano	Nekolikotvegano	Niti niti	Tvegano	Zelotvegano	Ekstremno tvegano	Ne želim odgovoriti
Govoriti o nepriljubljeni problematiki na sestanku v službi.	○	○	○	○	○	○	○	○
Sončiti se brez sončne kreme.	○	○	○	○	○	○	○	○
Pilotirati majhno letalo.	○	○	○	○	○	○	○	○
Bungee skok iz visokega mostu.	○	○	○	○	○	○	○	○
Hoditi domov sam ponoči v nevarnem območju mesta.	○	○	○	○	○	○	○	○
Selitev v mesto, oddaljeno od razširjene družine.	○	○	○	○	○	○	○	○
Začeti novo kariero v sredi svojih tridesetih.	○	○	○	○	○	○	○	○
Pustiti svoje majhne otroke doma, medtem ko opravljate opravilo.	○	○	○	○	○	○	○	○
Ne vrnete denarnice, katero ste našli in vsebuje 200 eurov.	○	○	○	○	○	○	○	○

BLOK (3) (Pričakovane koristi)

Q3 - Za vsako od naslednjih trditev **navedite koristi**, ki bi jih dobili od vsake situacije. Navedite oceno od 1 do 7 z uporabo naslednje lestvice:

	1Nobene koristi	2	3	4Zmerne ugodnosti	5	6	7Velike koristi	Ne želim odgovoriti
Priznati, da so vaši okusi drugačni od vašega prijatelja.	○	○	○	○	○	○	○	○
Kampiranje v divjini.	○	○	○	○	○	○	○	○
Staviti dnevni zaslužek na	○	○	○	○	○	○	○	○

	1Nobene koristi	2 3	4Zmerne ugodnosti	5 6	7Velike koristi	Ne želim odgovoriti
konjskih dirkah.						
Vložiti 10% vašega letnega dohodka v sklad z zmerno rastjo.	○	○○	○	○○	○	○
Se močno napiti na družabnem srečanju.	○	○○	○	○○	○	○
Narediti vprašljive odbitke od plače.	○	○○	○	○○	○	○
Se nestrinjati z avtoriteto pri pomembnem vprašanju.	○	○○	○	○○	○	○
Staviti dnevni zaslužek pri igri pokra z velikimi vložki.	○	○○	○	○○	○	○
Imeti razmerje s poročenim moškim/poročeno žensko.	○	○○	○	○○	○	○
Oddajanje dela nekoga drugega kot vaše.	○	○○	○	○○	○	○
Spust po smučišču, ki presega vaše sposobnosti.	○	○○	○	○○	○	○
Vložiti 5% vašega letnega dohodka v zelo špekulativne vrednostne papirje.	○	○○	○	○○	○	○
Raftanje v nevarnih vodah.	○	○○	○	○○	○	○
Staviti dnevni vložek na izid tekme.	○	○○	○	○○	○	○
Imeti nezaščiten spolni odnos.	○	○○	○	○○	○	○
Razkrivanje prijateljeve skrivnosti nekomu drugemu.	○	○○	○	○○	○	○
Voziti avto brez pripetega varnostnega pasu.	○	○○	○	○○	○	○
Vložiti 10% vašega letnega dohodka v nov poslovni podvig.	○	○○	○	○○	○	○
Obiskovanje tečaja za padalce.	○	○○	○	○○	○	○
Voziti motor brez čelade.	○	○○	○	○○	○	○
Izbira kariere, v kateri boste resnično uživali, namesto varne kariere.	○	○○	○	○○	○	○
Govoriti o nepriljubljeni problematiki na sestanku v službi.	○	○○	○	○○	○	○
Sončiti se brez sončne kreme.	○	○○	○	○○	○	○
Pilotirati majhno letalo.	○	○○	○	○○	○	○
Bungee skok iz visokega mostu.	○	○○	○	○○	○	○
Hoditi domov sam ponoči v nevarnem območju mesta.	○	○○	○	○○	○	○
Selitev v mesto, oddaljeno od razširjene družine.	○	○○	○	○○	○	○
Začeti novo kariero v sredi svojih tridesetih.	○	○○	○	○○	○	○
Pustiti svoje majhne otroke doma,	○	○○	○	○○	○	○

	1Nobene koristi	2	3	4Zmerne ugodnosti	5	6	7Velike koristi	Ne želim odgovoriti
medtem ko opravljate opravilo.								
Ne vrnete denarnice, katero ste našli in vsebuje 200 eurov.	○	○	○	○	○	○	○	○

BLOK (4) (BFI-osebnost)

Q4 - Tu je nekaj značilnosti, ki se lahko nanašajo na vas ali pa tudi ne. Na primer, ali se strinjate, da ste nekdo, ki *rad preživlja čas z drugimi*? Prosim, označite poleg vsake izjave v kolikšni meri se s to izjavo **strinjate ali ne strinjate**.

Sem nekdo, ki ...

	Sploh se ne strinjam	Se ne strinjam	Niti niti	Se strinjam	Povsem se strinjam
je zgovoren/a.	○	○	○	○	○
je nagnjen/a k iskanju napak v drugih.	○	○	○	○	○
temeljito opravi svoje delo.	○	○	○	○	○
je depresiven/a.	○	○	○	○	○
je izviren/a.	○	○	○	○	○
je zadržan/a.	○	○	○	○	○
je koristen/a in nesebičen/a do drugih.	○	○	○	○	○
zna biti nekoliko nepreviden/a.	○	○	○	○	○
je sproščen/a, dobro obvladuje stres.	○	○	○	○	○
je radoveden/a.	○	○	○	○	○
je poln/a energije.	○	○	○	○	○
začne prepire z drugimi.	○	○	○	○	○
je zanesljiv delavec/ka.	○	○	○	○	○
je lahko napet/a.	○	○	○	○	○
je globok mislec.	○	○	○	○	○
ustvari veliko navdušenja.	○	○	○	○	○
zgladka oprosti drugim.	○	○	○	○	○
je pogosto neorganiziran/a.	○	○	○	○	○
se pogosto obremenuje s skrbmi.	○	○	○	○	○
ima budno domišljijo.	○	○	○	○	○
je pogosto tiho.	○	○	○	○	○
je na splošno zaupanja vreden.	○	○	○	○	○
je pogosto len/a.	○	○	○	○	○
je čustveno stabilen/a.	○	○	○	○	○
je domiseln/a.	○	○	○	○	○
ima odločno osebnost.	○	○	○	○	○
je lahko hladen/a in zadržan/a.	○	○	○	○	○
vztraja dokler naloga ni dokončana.	○	○	○	○	○
je lahko muhast/a.	○	○	○	○	○

	Sploh se ne strinjam	Se ne strinjam	Niti niti	Se strinjam	Povsem se strinjam
ceni umetniške, estetske izkušnje.	○	○	○	○	○
je včasih sramežljiv.	○	○	○	○	○
je obziren/a in prijazen/a do skoraj vseh.	○	○	○	○	○
naredi stvari učinkovito.	○	○	○	○	○
v napetih situacijah ostane miren/a.	○	○	○	○	○
ima rajši rutinsko delo.	○	○	○	○	○
je družaben.	○	○	○	○	○
je včasih nesramen do drugih.	○	○	○	○	○
naredi načrte in jih izpelje do konca.	○	○	○	○	○
z lahkoto postane živčen/a.	○	○	○	○	○
rad/a premišljuje, se igra z raznimi idejami.	○	○	○	○	○
ima le malo umetniških interesov.	○	○	○	○	○
rad/a sodeluje z drugimi.	○	○	○	○	○
je raztresen/a, se z lahkoto zamoti.	○	○	○	○	○
je kultiviran/a v umetnosti, glasbi ali literaturi.	○	○	○	○	○

BLOK (5) (Demografija)
XSPOL - Spol:

○ Moški
○ Ženski

BLOK (5) (Demografija)
XSTAR2a4 - V katero starostno skupino spadate?

○ 18-29 let
○ 30-39 let
○ 40-49 let
○ 50-65 let
○ 65 +

BLOK (5) (Demografija)
XIZ1a2 - Kakšna je vaša najvišja dosežena formalna izobrazba?

- ◯ Dokončana osnovna šola
- ◯ Poklicna šola/ Srednja šola
- ◯ 1. bolonjska stopnja
- ◯ Univerzitetna izobrazba, 2. bolonjska stopnja
- ◯ Znanstveni magisterij, Doktorat
- ◯ Ne želim odgovoriti

BLOK (5) (Demografija)
XIZ1a21 - Kakšna je vaš osebni mesečni neto dohodek?

- ◯ od 667 do 1.114,16
- ◯ Nad 1.114,16 do 2.228,34
- ◯ Nad 2.228,34 do 3.342,51
- ◯ Nad 3.342,51 do 5.570,85
- ◯ Več kot 5.570,85
- ◯ Ne želim odgovoriti

BLOK (5) (Demografija)
Q5 - Koliko let mislite, da boste živeli?

Appendix 4: Summary of Financial Statements for the Selected Slovenian Company

Table 1: Summary of Balance Sheet for the Selected Slovenian Company (FY15A-FY18A)

Currency: €m	**Dec15A**	**Dec16A**	**Dec17A**	**Dec18A**
Tangible assets	13.0	11.0	14.1	16.9
Intangible assets	0.1	0.1	0.1	0.1
Fixed assets	**13.1**	**11.1**	**14.2**	**17.0**
Inventories	1.4	1.4	1.3	1.8
Trade receivables	*9.6*	*10.7*	*11.5*	*13.2*
Other receivables	*0.0*	*0.0*	*0.0*	*0.0*
Trade and other receivables	9.6	10.7	11.5	13.2
Trade payables	*(8.0)*	*(5.5)*	*(5.3)*	*(3.5)*
Other payables	*(1.0)*	*(0.9)*	*(0.7)*	*(0.5)*
Trade and other payables	(9.0)	(6.4)	(6.0)	(4.0)
Deferred costs and accrued revenues	0.2	0.1	0.1	0.2
Accrued costs and deferred revenues	(1.4)	(1.8)	(2.6)	(3.4)
Net working capital	**0.8**	**4.1**	**4.3**	**7.7**
Cash and cash equivalents	0.1	0.1	0.1	0.0
Long-term financial liabilities	*(5.4)*	*(4.6)*	*(4.1)*	*(4.5)*
Short-term financial liabilities	*0.0*	*0.0*	*0.0*	*0.0*
Financial liabilities	(5.4)	(4.6)	(4.1)	(4.5)
Net debt	**(5.4)**	**(4.4)**	**(4.0)**	**(4.5)**

Table 1: Summary of Balance Sheet for the Selected Slovenian Company (FY15A-FY18A) (continued)

Currency: €m	**DEC15A**	**DEC16A**	**DEC17A**	**DEC18A**
Long-term financial investments	*6.1*	*6.1*	*5.5*	*4.4*
Short-term financial investments	*5.2*	*3.0*	*2.5*	*1.8*
Financial investments	11.3	9.0	8.0	6.1
Investment property	2.2	0.0	0.0	0.0
Assets held for sale	0.0	0.0	0.0	0.0
Deferred tax assets	0.0	0.0	0.0	0.0
Provisions	(0.8)	(0.6)	(3.1)	(5.2)
Other items	**12.7**	**8.4**	**5.0**	**0.9**
Net assets	**21.2**	**19.1**	**19.4**	**21.2**
Share capital	9.6	9.6	10.3	10.3
Share premium	1.4	1.4	1.7	1.7
Reserves from profit	1.6	1.6	1.6	1.6
Revaluation surplus	(0.1)	(0.1)	(0.0)	(0.0)
Retained earnings	3.5	1.7	0.9	1.2
Net income/(loss)	0.2	0.1	0.3	0.3
Shareholders' equity	**16.1**	**14.2**	**14.8**	**15.1**

Source: Bisnode (2015b, 2016b, 2017b, 2018b).

Table 2: Summary of Profit and Loss Statement for the Selected Slovenian Company (FY15A-FY18A)

Currency: €m	**FY15A**	**FY16A**	**FY17A**	**FY18A**
Net revenues	38.1	45.3	59.3	60.2
Change in inventory	0.0	0.0	0.0	0.0
Capitalized own products	0.0	0.0	0.0	0.0
Other operating revenues	0.0	0.0	0.0	0.0
Gross revenues	**38.1**	**45.3**	**59.3**	**60.2**
Cost of goods and materials used	(31.2)	(36.8)	(40.5)	(38.5)
Cost of services	0.0	0.0	0.0	0.0
Labour costs	0.0	0.0	0.0	0.0
Other operating expenses	(0.1)	(0.1)	(0.5)	(0.1)
EBITDA	**6.8**	**8.3**	**18.3**	**21.5**
Depreciation and amortization	(3.5)	(1.9)	(1.8)	(1.8)
Revaluation expense	(3.5)	(1.8)	(1.2)	(1.7)
EBIT	**(0.2)**	**4.7**	**15.3**	**18.1**
Financial income	3.9	2.4	2.0	2.5
Financial expenses	0.0	0.0	0.0	0.0
Other income	0.0	0.0	0.0	0.0
Other expenses	0.0	0.0	0.0	0.0
Profit before taxes	**3.7**	**7.1**	**17.2**	**20.6**
Income tax	0.0	0.0	0.0	0.0
Deferred taxes	0.0	0.0	0.0	0.0
Net profit for the period	**3.7**	**7.1**	**17.2**	**20.6**

Source: Bisnode (2015b, 2016b, 2017b, 2018b).

Appendix 5: Aggregate Analysis provided by Bisnode

Table 3: Aggregate Analysis provided by Bisnode

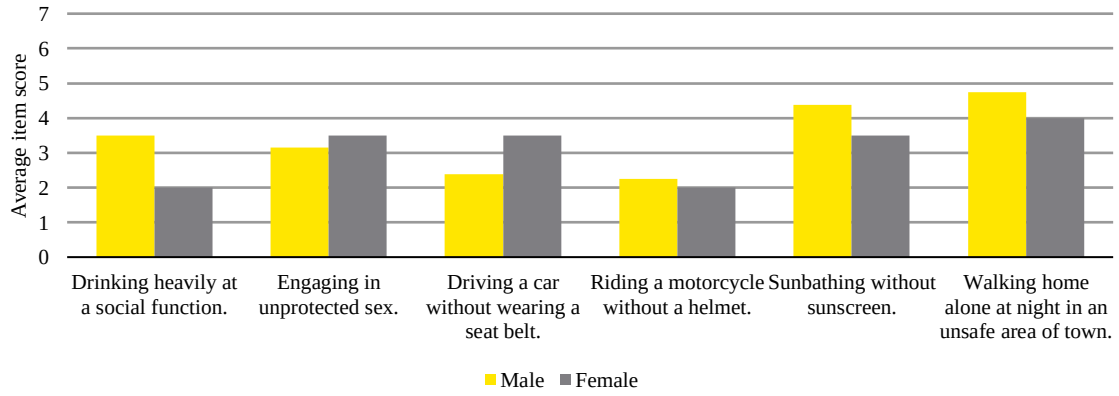
Leto	Gross Revenues (sl. Celotni poslovni izid) in €	Total assets (sl. Sredstva) in €	Equity (sl. Kapital) in €	ROA (%)	ROE (%)
2015	18,184,637	272,759,934	81,838,125	6.7	22.2
2016	19,183,186	272,707,743	84,085,122	7.0	22.8
2017	28,120,358	308,763,856	101,854,335	9.1	27.6
2018	25,458,666	339,742,172	114,792,741	7.5	22.2

Source: Bisnode (2015c, 2016c, 2017c, 2018c).

Appendix 6: Gender Differences within the Health/Safety and Recreational Risk-Taking Domains

Bellow, the figure depicts the differences in average item scores between female and male managers within the health/safety risk-taking domain. Female managers are more likely to drive a car without wearing a seat belt and engage in unprotected sex than male managers.

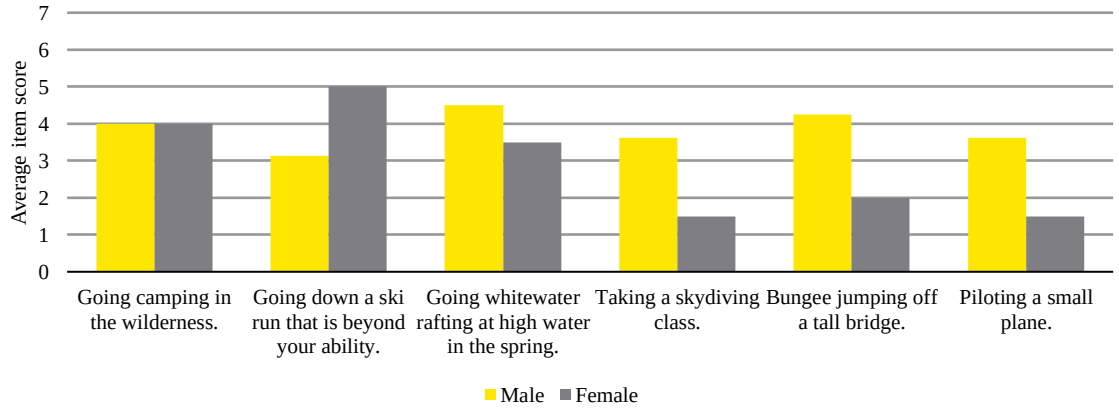
Figure 1: The average item scores within Health/Safety Risk-taking Domain by gender (N=10)



Source: Own work.

The bellow figure presents the differences in average item scores between female and male managers within the recreational risk-taking domain. Female managers are more likely to go down a ski run that is beyond their abilities than male managers. It is equally likely for male and female managers to go camping in the wilderness.

Figure 2: The average item scores within Recreational Risk-taking Domain by gender (N=10)

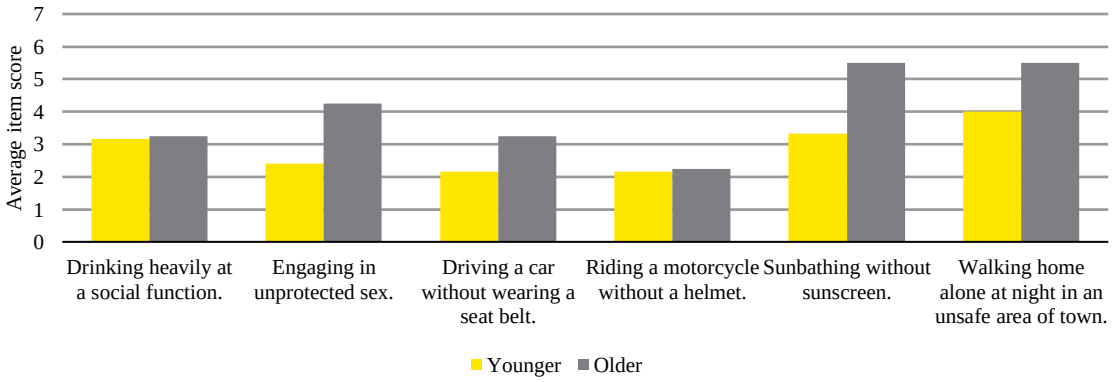


Source: Own work.

Appendix 7: Age Differences within the Health/Safety and Recreational Risk-Taking Domains

Based on bellow figure, which shows differences in average item scores between younger and older managers within health/safety risk-taking domain, I can observe that older managers are more likely to engage in unhealthy/unsafe behaviour than younger managers. Despite this, it is equally likely for both groups to be drinking heavily at social functions or ride a motorcycle without a helmet.

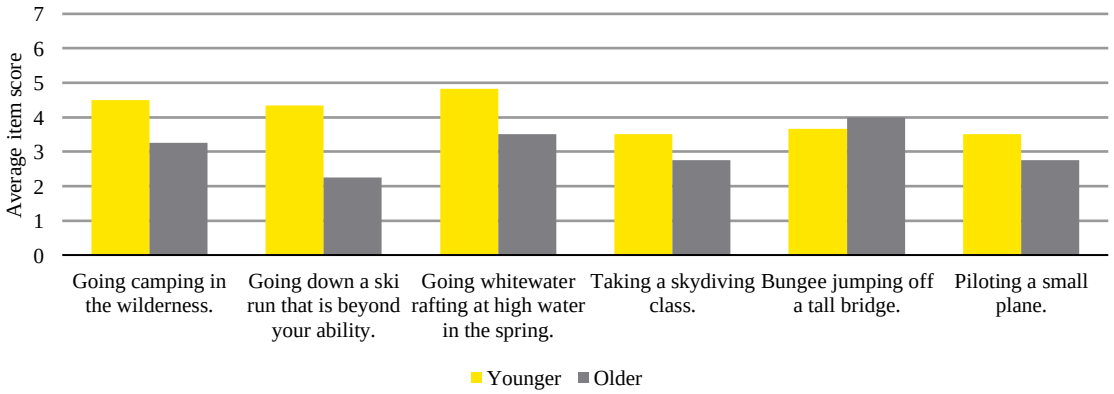
Figure 3: The average item scores within Health/Safety Risk-taking Domain by age (N=10)



Source: Own work.

The bellow figure shows the differences in average item scores between younger and older managers within the recreational risk-taking domain. Younger managers are more likely to take on recreational risks than older managers except when it comes to bungee jumping off a tall bridge.

Figure 4: The average item scores within Recreational Risk-taking Domain by age (N=10)

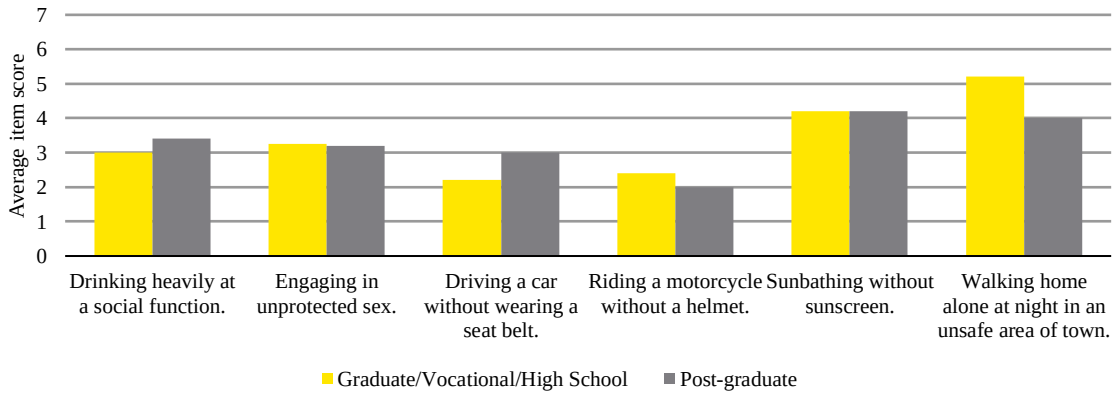


Source: Own work.

Appendix 8: Educational Differences within the Health/Safety and Recreational Risk-Taking Domains

Bellow the figure shows differences in average item scores within Health/Safety Risk-taking Domain by education categories. Managers with a post-graduate degree are more likely to drink heavily at a social function and drive a car without wearing a seat belt. Both groups are equally likely to sunbathe without sunscreen or have unprotected sex.

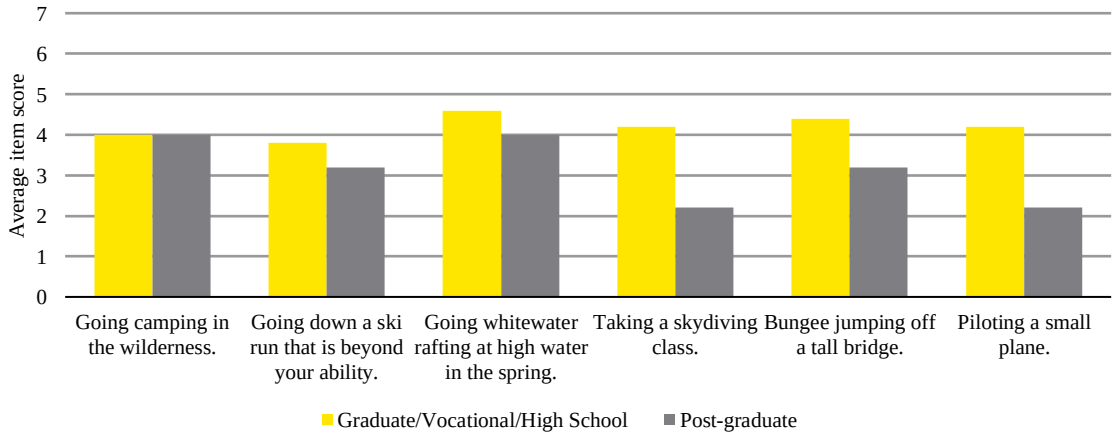
Figure 5: The average item scores within Health/Safety Risk-taking Domain by education (N=10)



Source: Own work.

The bellow figure presents the differences in average item scores within Recreational Risk-taking Domain by education categories. Managers who do not have a post-graduate degree are more likely to be recreational risk takers than a manager with a post-graduate degree. However, it is equally likely for both to go camping in the wilderness.

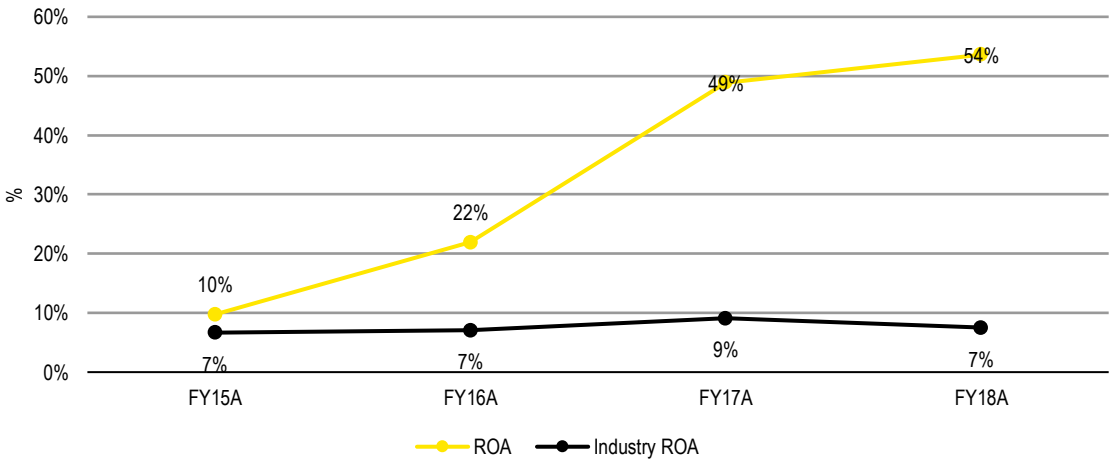
Figure 6: The average item scores within Recreational Risk-taking Domain by education (N=10)



Source: Own work.

Appendix 9: Movement of Firms ROA Compared to Industry ROA

Figure 7: Movement of Firms ROA Compared to Industry ROA.



Source: Own work based on Bisnode Gvin (2015-2018a, 2015-2018b).

Appendix 10: Frequency Tables of Demographic Characteristics

Table 4: Frequency Table based on Gender (N=10)

	Frequency	Per cent	Valid Percent	Cumulative per cent
Male	8	80.0	80.0	8
Female	2	20.0	20.0	2
Total	10	100.0	100.0	10

Source: Own work.

Table 5: Frequency Table based on Age (N=10)

	Frequency	Per cent	Valid Percent	Cumulative per cent
18-29 years old	1	10.0	10.0	10.0
30-39 years old	5	50.0	50.0	60.0
40-49 years old	3	30.0	30.0	90.0
50-65 years old	1	10.0	10.0	100.0
Total	10	100.0	100.0	

Source: Own work.

Table 6: Frequency Table based on Education (N=10)

	Frequency	Per cent	Valid Percent	Cumulative per cent
High School/ Vocational School	3	30.0	30.0	30.0
I. Bologna degree	2	20.0	20.0	50.0
University degree/II. Bologna degree	4	40.0	40.0	90.0
Master's degree/PhD	1	10.0	10.0	100.0
Total	10	100.0	100.0	

Source: Own work.

Table 7: Frequency Table based on Education (N=10)

	Frequency	Per cent	Valid Percent	Cumulative per cent
Above €1,114.16 up to €2,228.34	1	10.0	16.7	16.7
Above €2,228.34 up to €3.342.51	4	40.0	66.7	83.3
Above €3.342.51 up to €5,570.85	1	10.0	16.7	100.0
Total	6	60.0	100.0	
Missing	4	40.0		

Source: Own work.

Appendix 11: Normality Tests for Age, Gender, and Education

Table 8: Normality Test based on Age (N=10)

		Shapiro-Wilk		
	Gender	**Statistic**	**Df**	**Sig**
RT	Younger	.952	6	.760
	Older	.998	4	.993
RP	Younger	.948	6	.721
	Older	.933	4	.615
RB	Younger	.936	6	.630
	Older	.988	4	.947
BFI Extraversion Scale Score.	Younger	.898	6	.360
	Older	.729	4	.024
BFI Agreeableness Scale Score	Younger	.885	6	.292
	Older	1.000	4	1.000
BFI Conscientiousness Scale Score	Younger	.889	6	.312
	Older	.927	4	.578
BFI Neuroticism Scale Score	Younger	.942	6	.678
	Older	.950	4	.714
BFI Openness Scale Score	Younger	.889	6	.313
	Older	.963	4	.798

Source: Own work.

Table 9: Normality Test based on Gender (N=10)

		Shapiro-Wilk		
	Gender	**Statistic**	**Df**	**Sig**
RT	Male	.919	8	.420
	Female			
RP	Male	.965	8	.854
	Female			
RB	Male	.957	8	.778
	Female			
BFI Extraversion Scale Score.	Male	.911	8	.360
	Female			
BFI Agreeableness Scale Score	Male	.978	8	.951
	Female			
BFI Conscientiousness Scale Score	Male	.856	8	.108
	Female			
BFI Neuroticism Scale Score	Male	.936	8	.575
	Female			
BFI Openness Scale Score	Male	.959	8	.804
	Female			

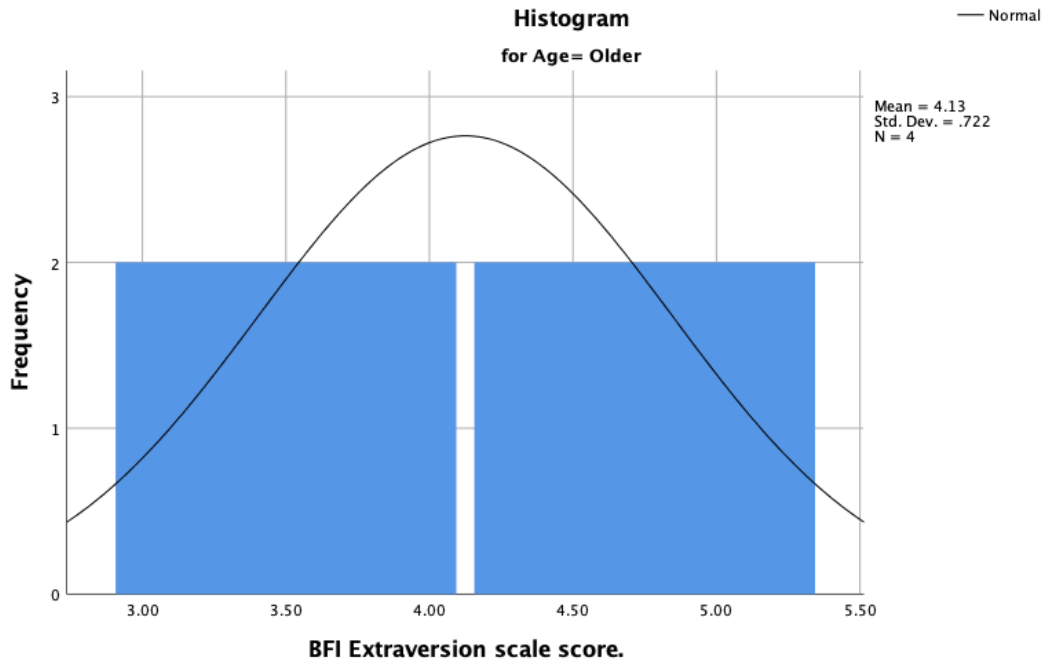
Source: Own work.

Table 10: Normality Test based on Education (N=10)

		Shapiro-Wilk		
	Gender	**Statistic**	**Df**	**Sig**
RT	Graduate/Vocational/High School	.978	5	.921
	Post-graduate	.845	5	.178
RP	Graduate/Vocational/High School	.958	5	.791
	Post-graduate	.996	5	.995
RB	Graduate/Vocational/High School	.977	5	.917
	Post-graduate	.855	5	.211
BFI Extraversion Scale Score.	Graduate/Vocational/High School	.928	5	.580
	Post-graduate	.998	5	.999
BFI Agreeableness Scale Score	Graduate/Vocational/High School	.950	5	.740
	Post-graduate	.931	5	.603
BFI Conscientiousness Scale Score	Graduate/Vocational/High School	.934	5	.625
	Post-graduate	.739	5	.023
BFI Neuroticism Scale Score	Graduate/Vocational/High School	.925	5	.565
	Post-graduate	.880	5	.311
BFI Openness Scale Score	Graduate/Vocational/High School	.993	5	.989
	Post-graduate	.942	5	.677

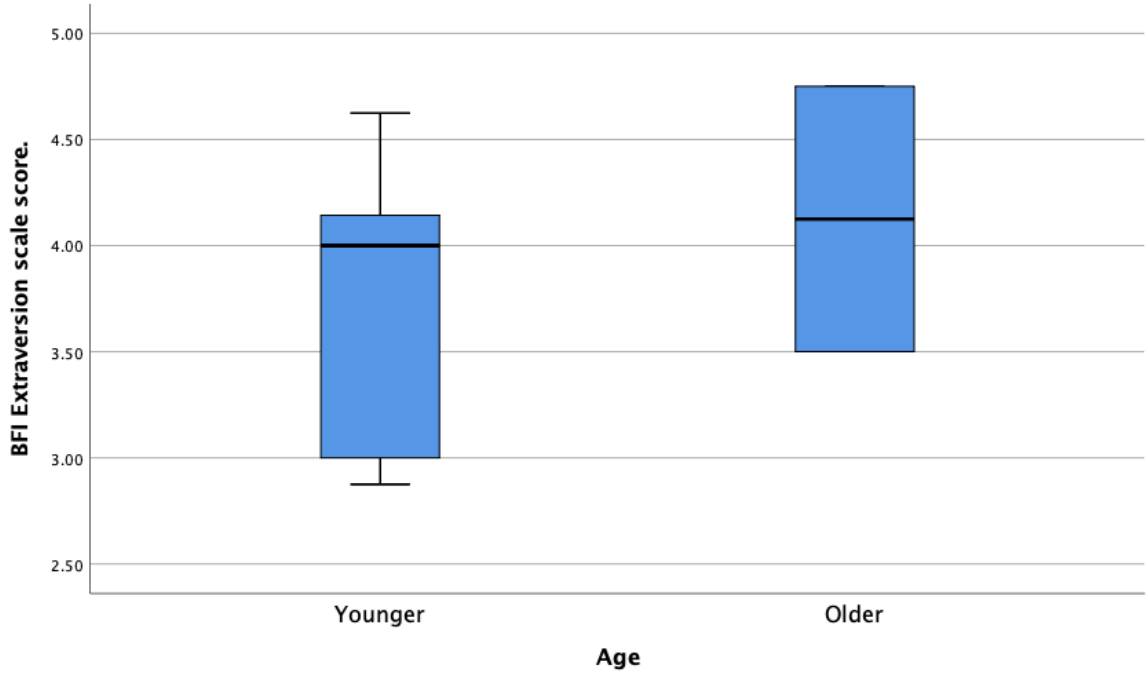
Source: Own work.

Figure 8: Histogram for BFI Extraversion Scale Score based on Age Group Older (N=4)



Source: Own work.

Figure 9: Boxplot for BFI Extraversion Scale Score based on Age (N=10)



Source: Own work.

Appendix 12: Independent t-tests by Gender, Age, and Education

Table 11: Independent t-test by Gender (N=10)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
RT	Equal variances assumed	2.609	0.145	-0.011	8	0.992	-0.00333	0.30711	-0.71154	0.70487
	Equal variances not assumed			-0.021	7.842	0.984	-0.00333	0.16076	-0.37536	0.36869
EthicalRT	Equal variances assumed	0.839	0.387	-0.745	8	0.477	-0.66667	0.89426	-2.72883	1.39549
	Equal variances not assumed			-1.352	6.899	0.219	-0.66667	0.49301	-1.83592	0.50259
FinancialRT	Equal variances assumed	1.445	0.264	-0.839	8	0.426	-0.62500	0.74463	-2.34211	1.09211
	Equal variances not assumed			-1.292	3.773	0.270	-0.62500	0.48361	-2.00023	0.75023
RecreationalRT	Equal variances assumed	4.175	0.075	0.711	8	0.497	0.93750	1.31875	-2.10354	3.97854
	Equal variances not assumed			1.386	7.990	0.203	0.93750	0.67659	-0.62305	2.49805
SocialRT	Equal variances assumed	1.077	0.330	0.049	8	0.962	0.04167	0.84625	-1.90980	1.99313
	Equal variances not assumed			0.088	6.573	0.932	0.04167	0.47324	-1.09227	1.17560
HealthRT	Equal variances assumed	1.519	0.253	0.450	8	0.665	0.29583	0.65738	-1.22009	1.81176
	Equal variances not assumed			0.911	7.752	0.390	0.29583	0.32477	-0.45727	1.04894

Source: Own work.

Table 12: Independent t-test by Age (N=10)

Independent Samples Test

		of Variances		t-test for Equality of Means						
									the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
RT	Equal variances assumed	2.584	0.147	-1.156	8	0.281	-0.26833	0.23212	-0.80361	0.26694
	Equal variances not assumed			-1.005	3.988	0.372	-0.26833	0.26703	-1.01063	0.47397
EthicalRT	Equal variances assumed	0.983	0.351	-0.742	8	0.480	-0.54167	0.73041	-2.22599	1.14265
	Equal variances not assumed			-0.658	4.265	0.545	-0.54167	0.82376	-2.77388	1.69055
FinancialRT	Equal variances assumed	5.719	0.044	-0.921	8	0.384	-0.55556	0.60301	-1.94609	0.83498
	Equal variances not assumed			-1.040	7.850	0.329	-0.55556	0.53432	-1.79180	0.68069
RecreationalRT	Equal variances assumed	1.622	0.239	0.921	8	0.384	0.97222	1.05569	-1.46221	3.40665
	Equal variances not assumed			0.795	3.898	0.472	0.97222	1.22279	-2.45805	4.40249
SocialRT	Equal variances assumed	4.147	0.076	-0.121	8	0.907	-0.08333	0.69044	-1.67549	1.50882
	Equal variances not assumed			-0.100	3.409	0.926	-0.08333	0.83472	-2.56842	2.40176
HealthRT	Equal variances assumed	2.290	0.169	-3.086	8	0.015	-1.13333	0.36720	-1.98010	-0.28656
	Equal variances not assumed			-2.666	3.904	0.057	-1.13333	0.42514	-2.32525	0.05859

Source: Own work.

Table 13: Independent t-test by Education (N=10)

Independent Samples Test

		of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	the Difference Lower	the Difference Upper
RT	Equal variances assumed	1.554	0.248	1.514	8	0.168	0.32800	0.21660	-0.17149	0.82749
	Equal variances not assumed			1.514	6.215	0.179	0.32800	0.21660	-0.19759	0.85359
EthicalRT	Equal variances assumed	1.037	0.338	0.226	8	0.827	0.16667	0.73749	-1.53398	1.86732
	Equal variances not assumed			0.226	5.789	0.829	0.16667	0.73749	-1.65395	1.98729
FinancialRT	Equal variances assumed	0.005	0.944	-0.779	8	0.458	-0.46667	0.59907	-1.84813	0.91480
	Equal variances not assumed			-0.779	7.992	0.458	-0.46667	0.59907	-1.84836	0.91503
RecreationalRT	Equal variances assumed	2.403	0.160	1.045	8	0.326	1.06667	1.02035	-1.28626	3.41959
	Equal variances not assumed			1.045	5.784	0.338	1.06667	1.02035	-1.45283	3.58616
SocialRT	Equal variances assumed	3.988	0.081	1.367	8	0.209	0.83333	0.60964	-0.57251	2.23918
	Equal variances not assumed			1.367	4.669	0.234	0.83333	0.60964	-0.76777	2.43443
HealthRT	Equal variances assumed	2.417	0.159	0.075	8	0.942	0.04000	0.53233	-1.18756	1.26756
	Equal variances not assumed			0.075	4.804	0.943	0.04000	0.53233	-1.34540	1.42540

Source: Own work.

Appendix 13: Independent t-tests by Gender, Age, and Education using Imputed Data

Table 14: Pooled Independent t-test by Gender (N=10)

Independent Samples Test

Imputation Number			Levene's Test for Equality of Variances		t-test for Equality of Means							Fraction Missing Info.	Relative Increase Variance	Relative Efficiency
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	the Difference Lower	the Difference Upper			
Pooled	RT	Equal variances assumed			0.056	2258772	0.955	0.01662	0.29601	-0.56354	0.59679	0.001	0.001	1.000
		Equal variances not assumed			0.106	175207.851	0.915	0.01662	0.15622	-0.28956	0.32280	0.005	0.005	0.999
	EthicalRT	Equal variances assumed			-0.716	1068448	0.474	-0.60389	0.84330	-2.25674	1.04896	0.002	0.002	1.000
		Equal variances not assumed			-1.276	105888.760	0.202	-0.60389	0.47316	-1.53128	0.32350	0.006	0.006	0.999
	FinancialRT	Equal variances assumed			-0.839		0.401	-0.62500	0.74463	-2.08444	0.83444	0.000	0.000	1.000
		Equal variances not assumed			-1.292		0.196	-0.62500	0.48361	-1.57286	0.32286	0.000	0.000	1.000
	RecreationalRT	Equal variances assumed			0.711		0.477	0.93750	1.31875	-1.64720	3.52220	0.000	0.000	1.000
		Equal variances not assumed			1.386		0.166	0.93750	0.67659	-0.38859	2.26359	0.000	0.000	1.000
	SocialRT	Equal variances assumed			0.049		0.961	0.04167	0.84625	-1.61696	1.70029	0.000	0.000	1.000
		Equal variances not assumed			0.088		0.930	0.04167	0.47324	-0.88587	0.96920	0.000	0.000	1.000
	HealthRT	Equal variances assumed			0.536	3788686	0.592	0.33284	0.62060	-0.88351	1.54919	0.001	0.001	1.000
		Equal variances not assumed			1.080	230678.006	0.280	0.33284	0.30828	-0.27137	0.93706	0.004	0.004	0.999

Source: Own work.

Table 15: Pooled Independent t-test by Age (N=10)

Independent Samples Test

Imputation Number			Levene's Test for Equality of Variances		t-test for Equality of Means							Fraction Missing Info.	Relative Increase Variance	Relative Efficiency
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	the Difference Lower	the Difference Upper			
Pooled	RT	Equal variances assumed			-1.068	244524	0.286	-0.24172	0.22639	-0.68544	0.20199	0.004	0.004	0.999
		Equal variances not			-0.916	452176.298	0.360	-0.24172	0.26400	-0.75915	0.27571	0.003	0.003	0.999
	EthicalRT	Equal variances assumed			-0.661	153805	0.508	-0.45796	0.69259	-1.81543	0.89950	0.005	0.005	0.999
		Equal variances not			-0.570	278114.140	0.569	-0.45796	0.80314	-2.03209	1.11616	0.004	0.004	0.999
	FinancialRT	Equal variances assumed			-0.921		0.357	-0.55556	0.60301	-1.73743	0.62632	0.000	0.000	1.000
		Equal variances not			-1.040		0.298	-0.55556	0.53432	-1.60280	0.49168	0.000	0.000	1.000
	RecreationalRT	Equal variances assumed			0.921		0.357	0.97222	1.05569	-1.09690	3.04134	0.000	0.000	1.000
		Equal variances not			0.795		0.427	0.97222	1.22279	-1.42440	3.36885	0.000	0.000	1.000
	SocialRT	Equal variances assumed			-0.121		0.904	-0.08333	0.69044	-1.43657	1.26990	0.000	0.000	1.000
		Equal variances not			-0.100		0.920	-0.08333	0.83472	-1.71936	1.55269	0.000	0.000	1.000
	HealthRT	Equal variances assumed			-3.136	115441	0.002	-1.08399	0.34571	-1.76158	-0.40639	0.006	0.006	0.999
		Equal variances not			-2.620	236833.376	0.009	-1.08399	0.41375	-1.89493	-0.27305	0.004	0.004	0.999

Source: Own work.

Table 16: Pooled Independent by Education (N=10)

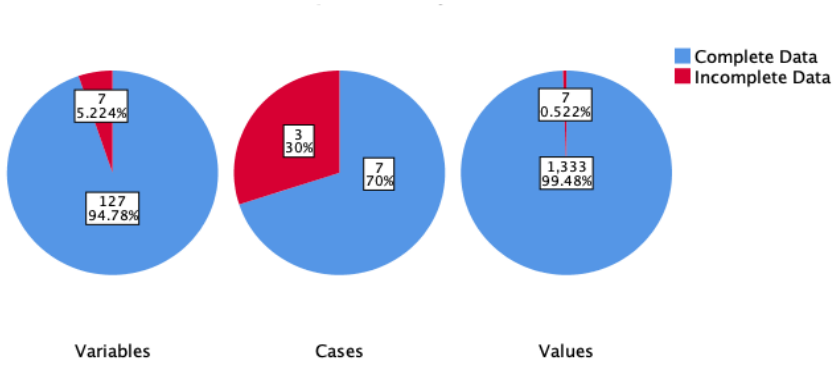
Independent Samples Test

			Levene's Test for Equality of Variances		t-test for Equality of Means									
										the Difference		Fraction Missing Info.	Relative Increase Variance	Relative Efficiency
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper			
Pooled	RT	Equal variances assumed			1.797	72228	0.072	0.35993	0.20028	-0.03261	0.75247	0.007	0.007	0.999
		Equal variances not			1.797	72227.510	0.072	0.35993	0.20028	-0.03261	0.75247	0.007	0.007	0.999
	EthicalRT	Equal variances assumed			0.386	73598	0.699	0.26711	0.69125	-1.08773	1.62195	0.007	0.007	0.999
		Equal variances not			0.386	73598.360	0.699	0.26711	0.69125	-1.08773	1.62195	0.007	0.007	0.999
	FinancialRT	Equal variances assumed			-0.779		0.436	-0.46667	0.59907	-1.64083	0.70750	0.000	0.000	1.000
		Equal variances not			-0.779		0.436	-0.46667	0.59907	-1.64083	0.70750	0.000	0.000	1.000
	RecreationalRT	Equal variances assumed			1.045		0.296	1.06667	1.02035	-0.93318	3.06651	0.000	0.000	1.000
		Equal variances not			1.045		0.296	1.06667	1.02035	-0.93318	3.06651	0.000	0.000	1.000
	SocialRT	Equal variances assumed			1.367		0.172	0.83333	0.60964	-0.36155	2.02821	0.000	0.000	1.000
		Equal variances not			1.367		0.172	0.83333	0.60964	-0.36155	2.02821	0.000	0.000	1.000
	HealthRT	Equal variances assumed			0.197	253065	0.844	0.09921	0.50480	-0.89018	1.08860	0.004	0.004	0.999
		Equal variances not			0.197	253065.361	0.844	0.09921	0.50480	-0.89018	1.08860	0.004	0.004	0.999

Source: Own work

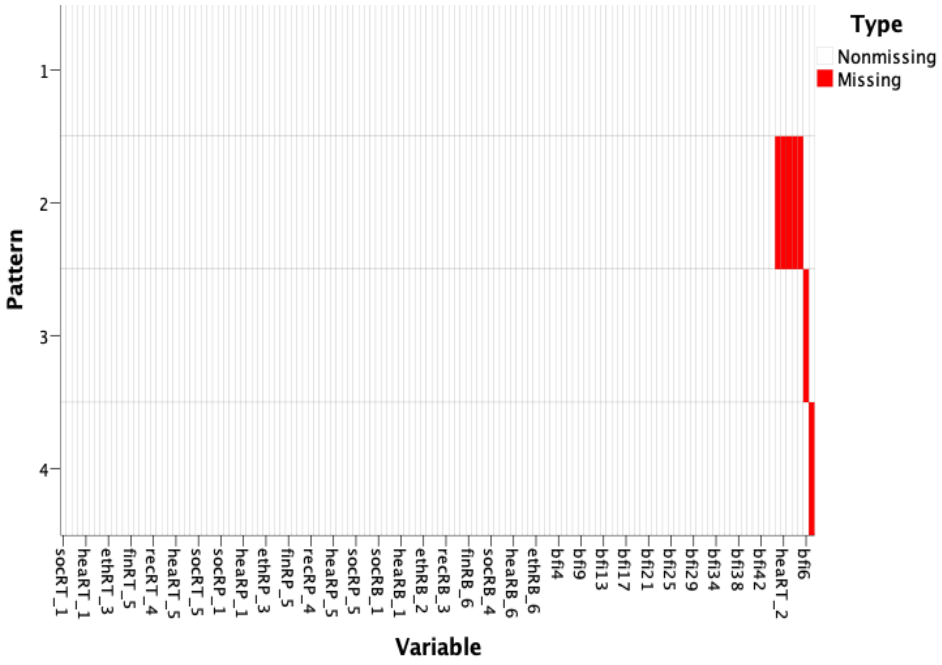
Appendix 14: Missing Values Analysis

Figure 10: Overall Summary of Missing Values



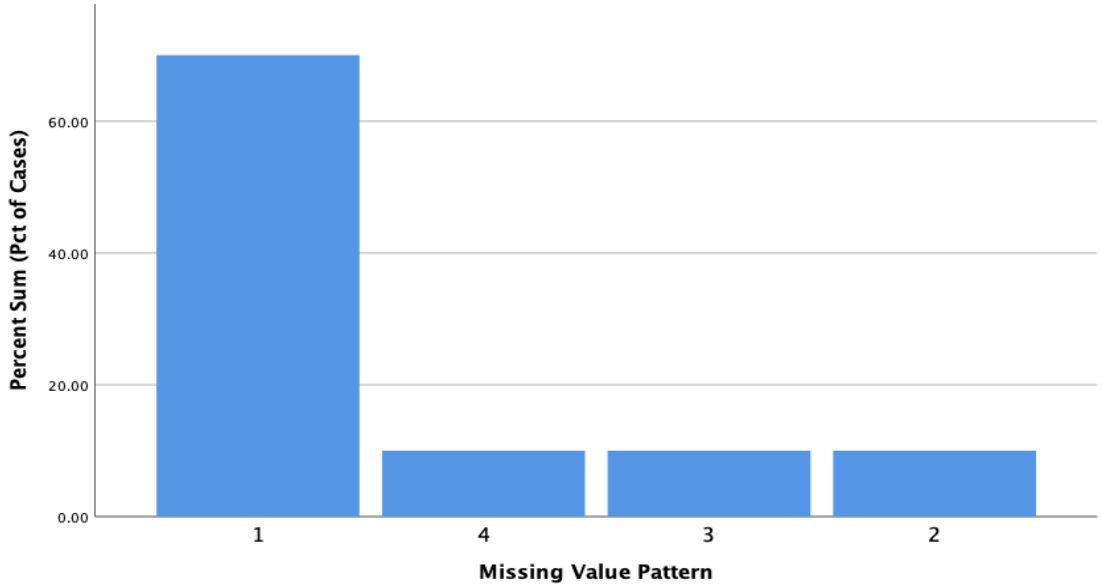
Source: Own work.

Figure 11: Missing Value Patterns



Source: Own work.

Figure 12: Missing Value Patterns based on their Percentage Sum



Source: Own work.

Appendix 15: Imputed Pooled Means versus Original Data Means

Table 17: Mean of Original Data and Imputed Data (Pooled Data) (N=10)

	N	Original Data Mean	Pooled Mean
BFI Extraversion scale score	10	3.9143	3.9100
BFI Agreeableness scale score	10	3.7111	3.7111
BFI Conscientiousness scale score	10	3.7514	3.7706
BFI Neuroticism scale score	10	2.6250	2.6250
BFI Openness scale score	10	3.8500	3.8500
EthicalRT	10	2.5500	2.6002
FinancialRT	10	3.3333	3.3333
RecreationalRT	10	3.6667	3.6667
SocialRT	10	5.1167	5.1167
HealthRT	10	3.3200	3.3496
EthicalRP	10	4.4000	4.3430
FinancialRP	10	4.4500	4.4500
RecreationalRP	10	4.1500	4.1500
SocialRP	10	3.6333	3.6333
HealthRP	10	4.4033	4.4122
EthicalRB	10	2.0667	2.0667
FinancialRB	10	2.9333	2.9333
RecreationalRB	10	2.9000	2.9000
SocialRB	10	4.4667	4.4667
HealthRB	10	1.8033	1.8285
RT	10	3.5973	3.6133
RP	10	4.2073	4.1977
RB	10	2.8340	2.8390
Valid N (listwise)	10		

Source: Own work.

Appendix 16: Pooled Correlations between Risk-Taking, Risk Perception, Perceived Benefits and Personality Dimensions on Imputed Data

Table 18: Pooled Correlations on Imputed Data between Risk-Taking, Risk Perceptions, and Perceived Benefits (N=10)

Scale	Ethical	Financial	Health/safety	Recreational	Social
Risk-taking scales					
Risk perceptions					
Ethical	**.243**	-.383	-.190	.506	.046
Financial	-.668*	**-.434**	-.690*	.869**	.093
Health/safety	-.370	.184	**-.697***	.565	.147
Recreational	.792**	.430	.470	**-.549**	-.500
Social	.036	.261	.538	-.297	**.373**
Perceived benefits					
Ethical	**.499**	.290	.422	-.504	-.809**
Financial	-.354	**.414**	-.234	.136	-.557
Health/safety	.026	-.019	**.309**	.174	-.355
Recreational	-.578	-.612	-.566	**.962****	.449
Social	-.224	-.171	.175	.160	**.816****
Perceived benefits scale					
Risk perceptions					
Ethical	**-.087**	-.179	.218	.523	-.240
Financial	-.361	**.382**	.179	.869**	.052
Health/safety	-.488	.223	**-.160**	.469	-.100
Recreational	.695*	-.104	.138	**-.616**	-.624
Social	-.135	.029	.279	-.225	**.533**

Within-domain correlations are in bold.
*p < 0.05 (2-tailed), **p<0.01 (2-tailed)

Source: Own work.

Table 19: Pooled Correlations between Personality Dimensions, Risk-Taking, Risk Perceptions, and Perceived Benefits (N=10)

	DOSPERT scales				
Personality dimensions	**Ethical**	**Financial**	**Health/safety**	**Recreational**	**Social**
	Risk-taking				
Extraversion	.245	.097	.483	-.372	.295
Agreeableness	-.264	.010	.097	.217	.303
Conscientiousness	-.717*	-.244	-.634*	.871**	.197
Neuroticism	.283	.423	-.083	-.429	-.531
Openness	.104	-.125	.112	.029	.503
	Risk perception				
Extraversion	-.106	-.162	-.171	-.143	.749*
Agreeableness	-.159	-.130	-.082	-.095	.026
Conscientiousness	.321	.771**	.646*	-.579	-.086
Neuroticism	.050	-.192	.221	.483	-.189
Openness	.275	-.060	.124	.059	.005
	Perceived benefits				
Extraversion	-.138	-.160	.096	-.217	.279
Agreeableness	-.303	.050	.108	.163	.504
Conscientiousness	-.546	.434	.260	.787**	.269
Neuroticism	.380	.093	-.155	-.483	-.755**
Openness	-.411	-.570	-.300	.156	.090

*p < 0.05, **p<0.01

Source: Own work.